

AC. 4765

COUNTY BOROUGH OF CORK

REPORT OF THE
MEDICAL OFFICER
OF HEALTH

FOR THE YEAR

1942

•



COUNTY BOROUGH OF CORK



REPORT OF THE
MEDICAL OFFICER
OF HEALTH

FOR THE YEAR

1942

J. C. SAUNDERS, M.D., D.P.H.,
Medical Officer of Health.

CORK :
Eagle Printing Works Limited, 90 South Mall,
1943.

*To the Lord Mayor, Aldermen and Councillors,
of the County Borough of Cork.*

MY LORD MAYOR AND GENTLEMEN,

I present herewith my Annual Report for the year 1942. There was an appreciable increase in the mortality from tuberculosis and in infantile mortality during the year. The various factors concerned are discussed in the text. The general death rate, however, was slightly reduced in comparison with 1941. There was a sharp epidemic of diphtheria, associated with a low fatality rate. Maternal mortality was 1.7 per 1,000 which was the lowest during the period over which these figures have been collected. The city was entirely free from Typhoid fever during the year.

I have the honour to remain,

Your obedient servant,

J. C. SAUNDERS.

PUBLIC HEALTH STAFF

Medical Officer of Health :

J. C. Saunders, M.D., D.P.H.

Assistant Medical Officer of Health :

Patrick F. Fitzpatrick, M.B., B.Ch., B.A.O., D.P.H.

School Medical Officer :

Annie M. Sullivan, M.B., B.Ch., B.A.O., D.P.H.

Public Analyst :

Daniel J. O'Sullivan, M.Sc., F.I.C.

Chief Veterinary Officer :

S. R. J. Cussen, D.V.S.M., M.R.C.V.S.

Assistant Veterinary Officer :

J. C. Brown, M.R.C.V.S.

Sanitary Inspectors :

John O'Brien

Timothy Newman

Thomas F. Murray

Daniel Murphy

James V. Nerney

Leo. J. Woodnutt

Miss N. Dunn

Tuberculosis Nurse:

Miss L. Lyndon.

Maternity and Child Welfare Nurses :

Miss M. Gillespie

Miss H. Neville

Miss H. A. Crowley

School Nurses :

Miss M. Lordan

Miss M. O'Sullivan

Miss N. Dillon

Clerk and Inspector to Port Sanitary Authority :

J. P. Kieran

CONTENTS.

SECTIONS :	Page
I.—Physical Features	1
II.—Vital Statistics	2
III.—Infectious Diseases	13
IV.—Tuberculosis	38
V.—Maternity and Child Welfare	61
VI.—Control of Food Supplies	72
VII.—Water Supply	87
VIII.—Sanitary Department	91
IX.—Housing	94
X.—Port Sanitary Administration	97
XI.—Meteorology	114
APPENDICES :	
I.—Venereal Disease	116
II.—Welfare of the Blind	118

SUMMARY OF STATISTICS.

Area (in Acres)				2,618
Population (Register of Population 1941)				76,750
Density of Population (persons to the acre)				28.9
Rateable Value			£238,551	0 0
Sum represented by a Penny Rate... ..			£913	
Number of Births				1,706
Birth Rate				22.2
Number of Deaths				1,221
Death Rate				15.9
Maternal Mortality Rate				1.7
Infantile Mortality				100
Zymotic Death Rate				1.0

Section 1.—Physical Features of the Area

The City of Cork is situated on the river Lee, fifteen miles from its mouth in Cork Harbour. On the north bank of the river there is steep rising ground almost prohibiting building development, save in the form of hillside roads and open building of large houses, with the exception of the marked break of the Blackpool valley, very full use of which has been made. Next comes the flat island comprising the centre of the City. This island is almost entirely artificial, and consists of six feet of filled-in material, with ten feet of slob below that and then gravel overlying old red sandstone. Southwards is a gently undulating tract of land about one and a half miles wide enclosed by a range of hills. There is a considerable amount of land liable to flood in the Lee Valley, west of the city, towards Carrigrohane, and the flatness of the islands on which the city is built and the height to which unusual tides ascend being nearly to the crown of the arches of the old bridges, render certain portions of the city itself also liable to flooding.

The geological formation of the city region is simple and clearly marked in its effect on the landscape. There are only two systems visible, both paleozoic rocks, the carboniferous limestone and the older underlying Devonian, representing the old red sandstone. Each of these formations is in two series; the carboniferous in a crystalline limestone and in a dark shale (with some 10 feet slate); The Devonian in the upper old red sandstone (yellowish and reddish) and in the lower, old red sandstone (red and purple). The characteristic aspect of the countryside has been caused by the crinkling of these strata into regular parallel folds. Further the limestone which should have formed the ridge of the anticlines has been denuded or dissolved away, so that the highest ground consists of old red sandstone, and even the lower series of this; the hollow folds, floored by limestone, have been subsequently protected from further denudation by a covering of boulder clay. In this immediate region there are thus three old red sandstone ridges and two limestone valleys, in the northern of which the city stands under the brow of the northern sandstone ridge. If this sandstone ridge had possessed its original limestone capping, it would probably have been at least 2,000 feet high.

Section II.—Vital Statistics.

1.—Population.

The decline in population numbers revealed by the Register of Population, 1941, was discussed at length in last year's Report. In the absence of any further information as to the accompanying changes in the age and sex constitution nothing can be added to the remarks then made. Appended herewith are the results of the counts resulting from the various census returns.

1881	...	...	...	80,124
1891	...	...	...	75,345
1901	...	...	...	76,122
1911	...	...	...	76,673
1926	...	...	...	78,464
1936	...	...	...	80,765
1941	...	...	...	76,758

The marked fall between the 1936 and 1941 counts will be noted. There is every reason to believe that this has been very largely made up of young adults who have migrated from the city. If this supposition be true it has an important bearing on mortality statistics and, from this point of view it is to be hoped that the required information will be available at the earliest possible moment.

2.—Births.

According to the Annual Summary of the Registrar General, the total number of births *registered* in Cork during 1942 was 1,706. The number of live births *notified* to the Public Health Department (in accordance with the provisions of the Notification of Births Act) was 1,605. In addition to this latter figure there were 53 still births notified, bringing the total *notified* births to 1,658 for the year. There is therefore a difference of 15 between the number of registered live births and the number of notified live births, the latter being in excess. On the basis of the Registration General's figures the birth-rate for the year was 22.2. The birth-rate in this city has preserved a remarkable steadiness of character over the past fifty-seven years as shown in Table 1. The decennial averages during this period were as follows :—

1881-90	...	...	...	26.2
1891-1900	...	...	...	27.2
1901-10	...	...	...	26.0
1911-20	...	...	...	24.7
1921-30	...	...	...	23.5
1931-40	...	...	...	22.6
1941	...	...	...	21.8
1942	...	...	...	22.2

Table 1.—Birth Rates for Cork City and Éire from 1881.

Year	Cork	Éire	Year	Cork	Éire
1881	27.7	24.0	1911	26.0	22.8
1882	28.2	23.8	1912	24.8	22.7
1883	27.0	23.4	1913	24.2	22.6
1884	27.4	23.5	1914	24.3	22.3
1885	25.6	23.1	1915	23.2	22.0
1886	25.4	22.7	1916	22.6	21.1
1887	25.5	22.5	1917	20.2	20.0
1888	25.7	22.1	1918	20.8	19.9
1889	25.2	22.0	1919	23.8	19.9
1890	25.0	21.6	1920	28.3	21.6
1891	26.9	22.3	1921	24.6	19.7
1892	24.6	21.7	1922	24.2	19.5
1893	27.8	22.1	1923	26.2	20.5
1894	27.4	22.1	1924	25.5	21.0
1895	28.9	22.3	1925	23.8	20.8
1896	29.2	22.7	1926	21.5	20.6
1897	27.5	22.5	1927	21.7	20.3
1898	28.7	22.3	1928	21.7	20.1
1899	27.3	22.1	1929	20.9	19.8
1900	25.8	21.8	1930	25.4	19.9
1901	25.6	21.8	1931	24.4	19.4
1902	26.2	22.2	1932	23.0	19.0
1903	27.1	22.1	1933	23.7	19.3
1904	27.4	22.7	1934	24.4	19.5
1905	27.6	22.6	1935	24.8	19.6
1906	27.5	22.8	1936	23.7	19.6
1907	25.6	22.4	1937	22.3	19.1
1908	27.3	22.7	1938	21.1	19.4
1909	26.3	22.9	1939	21.1	19.1
1910	25.8	22.8	1940	20.7	19.1
			1941	21.8	18.9
			1942	22.2	22.3*

* From *Annual Summary* of Register General.

3.—Deaths.

In the Annual Summary of the Registrar General 1,221 deaths have been assigned to this area. This is a slight decrease on the figure for the previous year, which was 1,239. The corresponding crude death-rates are 15.9 and 16.1. Reference has been made in previous reports to the discrepancies which came to light between the Registrar General's figures and those locally collected. The latter are set out in Table 4 in which it is seen that the total amounts to 1,200. The difference, no doubt, is made up of deaths of persons normally resident in Cork which have taken place in other areas and have, accordingly been assigned to this. We would not have knowledge of such deaths but, in any case, the differences have usually been so slight as to be without any statistical significance. In last year's Report I drew attention to the relatively high figure for this area and alluded to the difficulty of arriving at any definite conclusion as to its significance in the absence of information as to the age and sex-constitution of the population. This information

is still not forthcoming. There is much presumptive evidence that the age-constitution has undergone a material change by reason of the considerable migration of young male adults to Great Britain. The fact that there has been no further deterioration in the rate is suggestive that this migration may have been a decisive factor in the production of the unfavourable figure which became apparent last year.

There was a substantial increase in the number of deaths from pulmonary tuberculosis (which will be discussed in the appropriate section). There were increases also in deaths from heart disease, cancer, enteritis and lobar pneumonia. Deaths from such conditions exhibit a marked tendency towards fluctuation although in the case of the last named a striking reduction became apparent in 1940 and was maintained in 1941. Allusion has been made to this reduction in previous reports in which it was suggested that the introduction of the sulphonamide drugs had played a decisive part in effecting the reductions. The increase in deaths from pneumonia in 1942 was quite sharp (from 17 to 27) and it is difficult to assign a definite cause for it.

FIG. 1.—DEATH RATE (ALL CAUSES) BY QUARTERS 1936—42

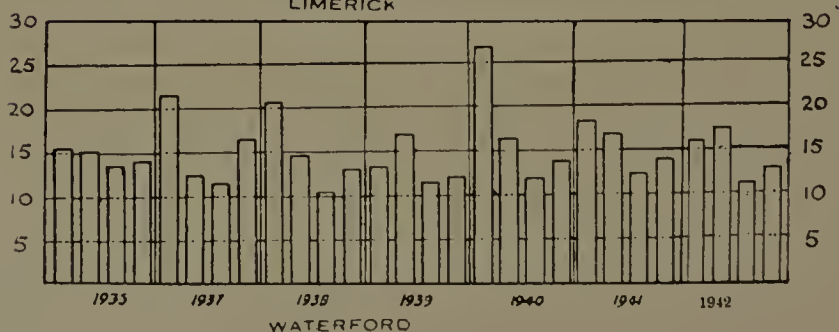
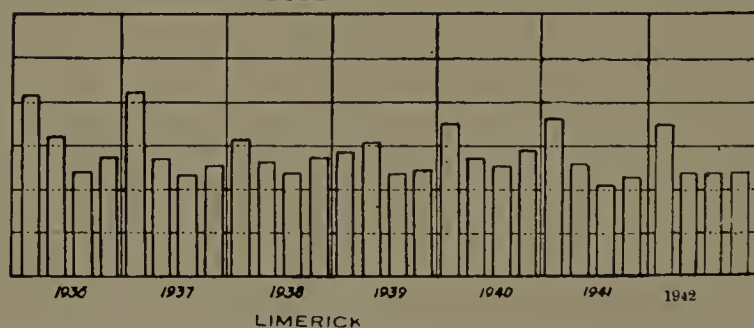
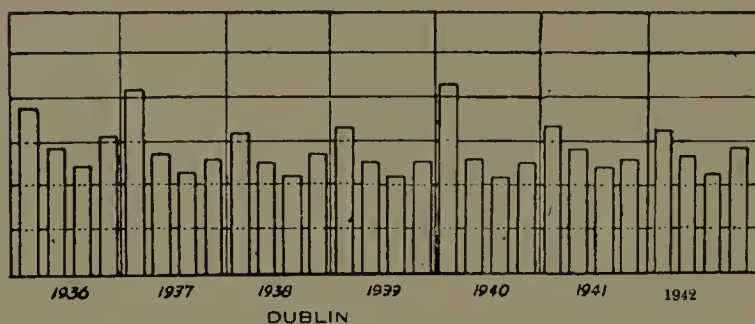
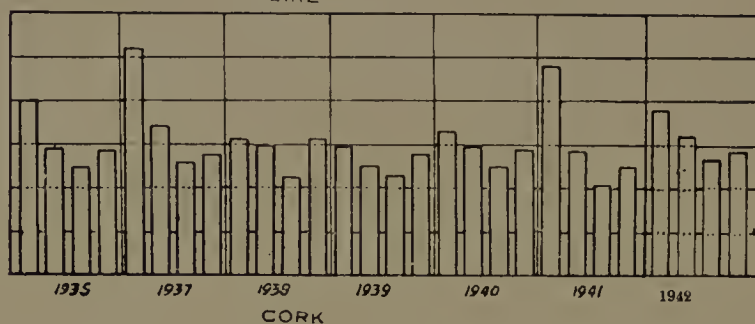
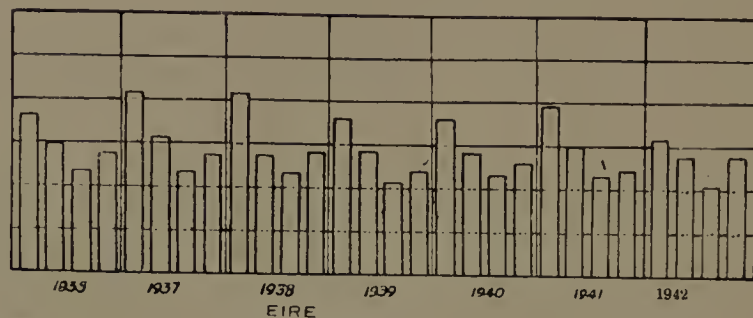


Table 2.—Deaths and Death-Rates (all Causes) by Quarters 1936 to 1942

Year	Consecutive Quarter	EIRE		CORK		DUBLIN		LIMERICK		WATERFORD	
		Number of Deaths	Rate per 1,000	Number of Deaths	Rate per 1,000	Number of Deaths	Rate per 1,000	Number of Deaths	Rate per 1,000	Number of Deaths	Rate per 1,000
1936	1	12,869	17.0	395	20.1	2,048	18.9	201	20.4	102	15.3
	2	10,801	14.6	281	14.3	1,669	14.3	156	15.8	99	14.9
	3	8,667	11.7	227	12.2	1,442	12.3	123	11.9	96	13.7
	4	10,253	13.8	285	14.1	1,837	15.7	141	13.6	97	13.9
1937	1	15,366	20.8	524	26.0	2,503	21.2	215	20.8	149	21.3
	2	11,214	15.2	346	17.1	1,624	13.8	137	13.2	85	12.2
	3	8,615	11.7	256	12.7	1,347	11.4	120	11.6	80	11.4
	4	9,920	13.5	277	13.7	1,549	13.1	131	12.7	115	16.4
1938	1	11,442	15.7	308	15.3	1,912	16.0	157	15.5	144	20.6
	2	9,814	13.4	297	14.7	1,486	12.5	135	13.2	103	14.7
	3	8,587	11.7	227	11.2	1,321	11.1	121	11.8	72	10.3
	4	10,198	13.9	308	15.3	1,636	13.7	138	13.4	90	12.9
1939	1	13,313	18.2	294	14.6	1,990	16.5	145	14.1	93	13.3
	2	10,372	14.2	253	12.5	1,537	12.7	157	15.3	119	17.0
	3	8,600	11.7	232	11.5	1,339	11.1	121	11.8	80	11.4
	4	9,432	12.9	281	13.9	1,537	12.7	125	12.2	84	12.0
1940	1	13,376	18.1	332	16.4	2,623	21.5	182	17.7	190	27.2
	2	10,506	14.2	299	14.8	1,599	13.1	141	13.7	117	16.7
	3	8,530	11.5	252	12.5	1,334	10.9	131	12.8	85	12.2
	4	9,621	13.0	293	14.5	1,509	12.4	150	14.6	98	14.0
1941	1	14,648	19.6	490	24.3	2,060	16.8	188	18.3	131	18.7
	2	11,328	15.1	291	14.4	1,746	14.2	133	13.0	120	17.2
	3	8,683	11.6	216	10.7	1,485	12.1	109	10.6	89	12.7
	4	9,164	12.3	242	12.6	1,612	13.2	122	11.5	101	14.2
1942	1	12,103	16.3	366	19.1	1,952	16.0	184	17.3	116	16.3
	2	10,811	14.6	312	16.3	1,694	13.8	130	12.2	126	17.7
	3	8,524	11.5	264	13.8	1,423	11.6	132	12.4	82	11.5
	4	10,181	14.0	279	14.5	1,786	14.6	134	12.6	93	13.1

In last year's Report reference was made to the investigation made by Dr. PERCY STOCKS, into the increase in deaths from *pulmonary tuberculosis* and *infant mortality* which became apparent in Great Britain in 1940 and 1941 and a comparable investigation was made into the relative statistics for this country and for the County Borough areas. The comparisons were based on the quarterly returns of the Registrar General and two tables with graphs were constructed. This investigation was continued for the period now under review the results of which are set out in Table 2 (and also in Fig. I both of which are an extension of the appropriate portion of last year's report). So far as the general death-rate is concerned there has been no deterioration. It will be noted from Table 3 that while there was a slight reduction in the rate for this locality there was a quite appreciable reduction for the country as a whole. Examining the quarterly returns (Table 2). The most striking feature is again the preponderance of deaths in the first quarter of the year.

As has already been said the general inference to be drawn from these figures is that there has been no material deterioration in the health of the community so far as the statistical evidence goes. It would however be very unwise to assume that circumstances will not become worse (and this is one reason for keeping a watch on the quarterly returns). We are living in critical times and any factor which may have the effect of reducing the available food supply can only be regarded with the deepest apprehension.

Table 3 sets out the death rates per 1,000 persons living in Cork City, Eire and in England and Wales during the period 1881 to 1942. These figures do not necessarily represent the relative healthiness of the communities concerned since they are based on crude death rates. In order to compare such conditions the figures would have to be based on standardised death-rates. The general trend of the death-rate is, however, indicated by this table. The more recent figures for England and Wales have not been included as the rates available have been standardised and, accordingly do not afford an adequate comparison.,

Table 3—Crude Death Rates per 1,000 living for Cork City, Éire and England and Wales, 1881-1942.

Year	Cork	Éire	E. & W.	Year	Cork	Éire	E. & W.
1881	26.8	17.1	18.9	1911	21.2	16.3	14.6
1882	24.7	16.9	19.6	1912	19.1	16.2	13.4
1883	24.9	18.6	19.6	1913	21.5	16.8	13.8
1884	26.7	17.4	19.7	1914	20.2	16.1	14.0
1885	26.2	18.0	19.2	1915	20.7	17.5	15.7
1886	22.1	17.4	19.5	1916	18.2	16.5	14.3
1887	22.4	17.9	19.1	1917	17.4	16.9	14.2
1888	24.1	17.4	18.1	1918	20.4	17.5	17.3
1889	22.3	16.9	18.2	1919	20.2	17.9	14.0
1890	22.2	17.6	19.5	1920	17.5	14.7	12.4
1891	26.9	17.6	20.2	1921	15.4	14.3	12.1
1892	26.4	18.7	19.0	1922	18.0	14.7	12.8
1893	24.5	17.3	19.2	1923	14.0	14.0	11.6
1894	24.9	17.7	16.6	1924	17.8	15.0	12.2
1895	23.9	17.7	18.7	1925	15.5	14.7	12.2
1896	22.6	15.9	17.1	1926	17.3	14.0	11.6
1897	24.7	17.8	17.4	1927	14.7	14.8	12.3
1898	23.7	17.7	17.5	1928	15.2	14.2	11.7
1899	26.3	17.0	18.2	1929	16.9	14.6	13.4
1900	24.2	19.1	18.2	1930	17.3	14.1	11.4
1901	23.0	17.1	16.9	1931	16.4	14.5	12.3
1902	21.5	17.0	16.3	1932	15.7	14.4	12.0
1903	19.4	17.0	15.5	1933	14.9	13.6	12.3
1904	21.6	17.6	16.3	1934	14.7	12.9	11.8
1905	21.7	16.4	15.3	1935	14.8	13.9	11.7
1906	20.2	16.2	15.5	1936	14.7	14.3	12.1
1907	20.6	17.0	15.1	1937	17.4	15.3	12.4
1908	22.2	17.1	14.8	1938	14.1	13.6	11.6
1909	22.1	16.8	14.6	1939	13.1	14.2	—
1910	19.3	16.6	13.5	1940	14.6	14.1	—
				1941	16.1	14.6	—
				1942	15.9	14.0	—

Table 4, which is based on Abstract V. of the Registrar-General's Annual Report, is an analysis of the causes of death during the year 1942. It differs from Abstract V. in this respect that the age-groups are more extended and that the causes of death have been sub-divided in some instances. For example, under the headings "other forms of tuberculosis" and "other defined diseases" the various causes of death are more fully set out. This has been made possible by the system of weekly collection of deaths from the district Registrar's registers and the card-index system of filing which has been adopted in connection with it. This table is compiled from the weekly returns collected by us from the local Registrars and the totals do not correspond with those of the Registrar-General in his Summary, which are not fully corrected. The number of deaths in this table amounts to 1,200 (as compared with 1,221 in the Summary) so that the error is but slight and probably due to deaths in other places which have been allocated by the Registrar-General to this area. Once again I have to acknowledge the assistance received from the Registrar-General in the compilation of these figures.

Table 4.—Analysis of Causes of Death at different age-periods during the year 1942.

Causes of Death	TOTAL	Sex		Un. 1 yr.	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and up
		M.	F.											
Whooping Cough ...	2	1	1	1	1	—	—	—	—	—	—	—	—	—
Diphtheria ...	21	10	11	2	10	9	—	—	—	—	—	—	—	—
Cerebro-Spinal Fever ...	1	—	1	—	—	1	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	106	61	45	—	—	2	26	23	19	22	9	4	1	—
Other Tuberculous Diseases :—														
(a) Meningitis ...	10	4	6	3	5	1	1	—	—	—	—	—	—	—
(b) Peritonitis ...	2	—	2	—	—	—	1	—	—	—	—	1	—	—
(c) Other Forms ...	6	4	2	—	1	—	—	1	—	2	1	1	—	—
Cancer ...	149	82	67	—	—	—	3	2	10	24	47	53	9	1
Diabetes ...	6	—	6	—	—	—	—	—	—	1	1	4	—	—
Cerebral Haemorrhage ...	69	22	47	—	—	1	—	—	2	3	24	26	11	2
Heart Disease ...	317	150	167	—	1	1	1	5	11	25	74	131	60	8
Arterio Sclerosis ...	14	10	4	—	—	—	—	—	2	4	3	1	3	1
Bronchitis ...	81	48	33	5	2	—	2	—	1	6	19	31	13	2
Pneumonia :—														
(a) Lobar ...	27	13	14	2	—	—	2	4	3	1	4	7	4	—
(b) Broncho ...	32	17	15	14	7	—	—	—	—	1	2	4	2	2
Other Respiratory Diseases ...	18	11	7	1	1	2	2	1	1	1	3	3	2	1
Gastric and Duodenal Ulcer ...	8	4	4	—	—	—	—	1	2	—	5	—	—	—
Diarrhoea and Enteritis ...	52	34	18	49	3	—	—	—	—	—	—	—	—	—
Appendicitis ...	4	2	2	—	1	—	1	—	—	1	1	—	—	—
Nephritis ...	21	10	11	—	1	1	2	3	1	2	4	6	—	1
*Puerperal Conditions ...	3	—	3	—	—	—	—	1	2	—	—	—	—	—
Congenital Debility and Premature Birth ...	50	25	25	49	1	—	—	—	—	—	—	—	—	—
Suicide ...	4	4	—	—	—	—	1	—	—	1	1	1	—	—
Other Violence ...	21	13	8	3	1	4	2	—	1	3	1	3	3	—
Other Defined Diseases :—														
(1) Gastro-Intestinal ...	10	6	4	—	1	—	1	1	1	—	2	1	3	—
(2) Convulsions ...	10	7	3	10	—	—	—	—	—	—	—	—	—	—
(3) Central Nervous System ...	14	11	3	1	1	1	—	1	1	3	2	4	—	—
(4) Anaemia and Blood Diseases ...	12	4	8	1	2	—	—	2	3	2	3	—	—	—
(5) Genito-Urinary ...	15	15	—	—	—	—	—	—	—	1	3	10	2	—
(6) Marasmus ...	12	10	2	12	—	—	—	—	—	—	—	—	—	—
(7) Rheumatic Diseases ...	11	5	6	—	—	—	—	—	—	2	3	5	1	—
(8) Hepatic Diseases ...	7	2	5	—	—	—	—	—	—	2	3	—	1	1
(9) Gangrene ...	7	2	5	—	—	—	—	—	—	—	3	3	1	—
(10) Senile Decay ...	47	14	33	—	—	—	—	—	—	—	—	7	28	12
(11) Miscellaneous ...	29	18	11	7	1	—	1	2	2	4	5	5	2	—
III Defined or Unknown Causes ...	2	1	1	—	—	—	—	—	—	—	1	—	1	—
Totals ...	1200	620	580	160	40	23	46	46	62	110	224	311	147	31

*No deaths from Puerperal Sepsis.

The principal causes of death (in order of importance) were as follows :—

1.	Heart Disease	...	317	(306)
2.	Cancer	...	149	(125)
3.	Pulmonary Tuberculosis		106	(88)
4.	Bronchitis	...	81	(114)
5.	Cerebral Haemorrhage		69	(73)
6.	Diarrhoea and Enteritis		52	(36)
7.	Broncho-pneumonia	...	32	(50)
8.	Premature Birth	...	50	(50)
9.	Senile Decay	...	47	(48)
10.	Lobar Pneumonia	...	27	(17)
11.	Violence	...	25	(29)
12.	Nephritis	...	21	(19)

The figures in parenthesis denote the corresponding number in 1941.

Cardiac Disease. As usual this condition accounts for the great bulk of the deaths. Stress has been laid on deaths from heart disease and allusion made to the fact that the majority of them are found to be recorded in the later age-groups which gives rise to the supposition that they represent a degenerative condition rather than an infective one. This feature has been reproduced this year as shewn in the following table.

Table 5.—Analysis of deaths from heart disease from 1931.

Year	Under 5 years	5/15 years	15/25 years	25/35 years	35/45 years	45/55 years	55/65 years	65/75 years	75 yrs and up	Total
1931	—	6	3	5	18	31	66	87	34	250
1932	—	6	2	9	17	39	50	99	36	258
1933	—	2	4	5	15	31	58	83	42	240
1934	1	3	4	5	20	17	66	103	39	258
1935	2	3	1	7	11	29	63	93	36	245
1936	4	3	3	7	6	32	64	98	48	265
1937	—	5	6	9	16	24	72	112	64	308
1938	1	2	2	2	12	35	67	106	76	304
1939	—	1	4	2	12	27	63	108	61	278
1940	2	—	5	4	12	21	66	109	74	293
1941	—	3	2	6	12	22	82	108	71	306
1942	1	1	1	5	11	25	74	131	60	317

The general trend of deaths from heart disease is shewn in the following table and a comparison made with deaths from cancer and pulmonary tuberculosis.

Table 6.—Trend of mortality from the three principal causes of death in Cork City from 1931.

Year	Condition		
	Heart Disease	Cancer	Pulmonary Tuberculosis
1931	250	124	103
1932	258	98	111
1933	240	114	106
1934	258	111	107
1935	245	133	115
1936	265	121	85
1937	308	117	96
1938	304	106	99
1939	278	143	86
1940	293	114	96
1941	306	125	88
1942	317	149	106

Cancer. The number of deaths attributable to this disease recorded by us was 149 as compared with 125 in 1941. The corresponding figures of the Registrar-General are 143 (uncorrected) and 124. The discrepancy observable here, no doubt, is due to a difference in classification, all forms of malignant disease being classed by us under this heading. For comparative purposes the Registrar-General's are the more correct figures. On the basis of 143 deaths the rate was 1.7 per 1,000 of the population.

Phthisis Death Rate. The deaths from pulmonary tuberculosis numbered 106 equivalent to a rate of 1.3 per 1,000 of the population. The corresponding figures for last year were 88 and 1.1 per 1,000 respectively. The figures for the years from 1911 onwards are set out in Section IV.

Infant Mortality. The number of deaths of children under one year of age was 171* which is equivalent to a rate of 100 per 1,000 live births. In 1941 the number of deaths was 143 and the rate 85 per 1,000. The contributory factors are discussed in Section V.

Maternal Mortality. There were 3 deaths from causes under this heading during the year. The maternal mortality rate was 1.7.

Infectious Disease Death Rate. The number of deaths from the principal infectious diseases was 73 equivalent to 1.0 per 1,000 of the population.

* This figure is taken from the Annual Summary of the Registrar-General for 1942 (p. 69). According to our computation the number of such deaths was 160 (equivalent to a rate of 94.1 per 1,000).

Table 7.—Deaths registered during the year 1942, for the County Borough of Cork by Registrars' Districts, with the mortality per 1,000 of the population from causes and from the Principal Epidemic Disease. Table taken from Annual Summary of Register General, the returns for which are not fully corrected. 10a

REGISTRAR'S DISTRICTS, &c.	INFANT MOR- TALITY PER 1,000 BIRTHS	ANNUAL RATE PER 1,000 POPULATION CENSUS 1936		DEATHS																												
				TOTAL DEATHS	AGES AT DEATH									DEATHS FROM										Influenza.	Cancer	Diseases of Respiratory System				Inquest Cases.	In Public Institutions	Number of Uncert- ified Deaths
					Under 1 year	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Principal Epidemic Diseases						Tuber- culosis		Pneumonia.	Other	Violence			Other Causes.						
													Typhoid fever Typhus, Small pox. Dysentery	Scarlet fever.	Whooping cough.	Diphtheria.	Measles	Diarrhoea and Enteritis (under 2 years).	Pulmonary	Other Forms.												
		FROM ALL CAUSES.	FROM PRIN- CIPAL EPI- DEMIC DIS- EASES	Under 1 year	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Typhoid fever Typhus, Small pox. Dysentery	Scarlet fever.	Whooping cough.	Diphtheria.	Measles	Diarrhoea and Enteritis (under 2 years).	Pulmonary	Other Forms.	Influenza.	Cancer	Pneumonia.	Other	Violence	Other Causes.	Inquest Cases.	In Public Institutions	Number of Uncert- ified Deaths				
CITY OF CORK																																
Cork Urban No. 1 ...	—	13.6	0.7	178	27	2	1	4	2	16	38	88	.	.	1	1	.	7	7	2	.	23	4	13	3	117	6	66	4			
„ No. 2† ...	—	—	—	162	19	2	5	3	10	18	50	55	.	.	.	4	.	4	15	4	.	22	6	8	3	96	7	91	1			
„ No. 3† ...	—	—	—	149	24	7	4	1	8	18	30	57	.	.	.	6	.	11	12	1	.	12	7	12	2	86	2	84	.			
„ No. 4† ...	—	—	—	115	21	3	2	1	5	10	35	38	.	.	.	2	.	6	10	1	.	18	5	13	3	57	4	71	1			
„ No. 5† ...	—	—	—	149	22	2	1	2	10	10	40	62	.	.	.	1	.	6	15	2	.	13	8	13	1	90	7	88	3			
„ No. 6 ...	—	15.2	1.1	180	20	2	4	4	5	13	57	75	.	.	1	4	.	8	17	3	.	20	8	20	6	93	9	121	.			
„ No. 7 ...	—	14.7	0.6	288	38	5	1	8	8	29	85	114	.	.	.	2	.	9	32	5	.	35	20	18	3	164	8	171	1			
TOTAL CITY OF CORK ...	100	15.9*	1.0*	1,221	171	23	18	23	48	114	335	489	.	.	2	20	.	51	108	18	.	143	58	97	21	703	42	692	10			

† The boundaries of these districts were altered on 1st April 1941; the populations, for the existing districts are not at present available

* These tables are calculated on the population according to the Register of Population, 1941.

Table 8.

105

Summary of Births and Deaths Registered during the Years 1878 to 1942, inclusive, in the Cork Urban Sanitary District with the number of Deaths from some of the principal causes.

YEAR	POPULATION	Rate per 1,000 persons represented by		NUMBER REGISTERED																							
				DEATHS		DEATHS.																					
						NUMBER CAUSED BY																					
						BIRTHS	TOTAL NUMBER	Under 1 year of age	At 65 years & upwards	Smallpox	Measles	Scarlet Fever	Typhus	Whooping Cough	Diphtheria	Enteric Fever	Diarrhoea	Influenza	Pneumonia	Tubercu- lous Disease		Cancer	Violence	Inquest Cases	No. in Public Institutions	Number of Uncertified	
All Causes	Principal Zymo- tic Diseases	Pulmonary	Other forms																								
1878...		31.7	27.0	—	2,546	2,464	350	681	...	81	1	...	59	1	...	75	...	...	...	...	23	87	863	...
1879...		33.5	29.0	3.8	2,707	2,639	319	711	...	49	65	...	19	2	...	48	...	...	...	...	30	113	977	...
1880...		28.5	30.8	5.9	2,620	2,837	376	624	...	73	204	...	47	13	...	86	...	289	...	...	23	99	1026	...	
1881...	80,124	27.7	26.8	4.1	2,167	2,101	271	611	...	36	30	88	61	4	4	87	...	237	...	...	14	82	673	...	
1882...		23.2	24.7	2.3	2,212	1,935	282	490	...	20	8	54	25	5	4	55	...	274	...	...	11	77	574	...	
1883...		27.0	24.9	2.0	2,161	1,993	236	572	...	35	8	46	5	10	11	38	...	271	...	...	9	50	646	...	
1884...		27.4	26.7	2.8	2,199	2,139	253	553	...	41	27	37	45	6	13	51	...	292	...	...	12	50	671	...	
1885...		25.6	26.2	2.3	2,054	2,098	247	614	...	6	48	21	55	5	9	35	...	287	...	...	7	36	587	...	
1886...		25.4	22.1	2.1	2,037	1,769	225	430	...	12	30	17	5	8	42	50	...	263	...	...	11	40	525	...	
1887...		25.5	22.4	1.8	2,042	1,792	252	490	...	34	1	12	6	2	20	67	...	233	...	...	15	43	490	...	
1888...		25.7	24.1	3.5	2,058	1,934	288	501	...	146	6	21	49	18	9	30	...	231	...	...	7	32	499	...	
1889...		25.2	22.3	1.9	2,023	1,786	253	497	...	1	10	5	88	7	9	32	...	278	...	...	8	34	433	...	
1890...		25.0	22.2	1.0	2,005	1,778	214	571	...	1	5	7	14	8	12	29	...	295	...	...	20	43	479	...	
1891...	75,345	26.9	26.9	1.4	2,024	2,025	281	630	...	—	4	5	29	11	17	34	...	295	...	...	15	35	557	...	
1892...		24.6	26.4	1.9	1,978	1,988	297	560	...	40	—	23	42	3	17	17	...	203	...	...	17	65	682	...	
1893...		27.8	24.5	1.3	2,092	1,844	268	517	...	6	2	7	14	3	14	51	...	314	...	...	15	58	596	...	
1894...		27.4	24.9	1.8	2,062	1,874	310	517	...	51	15	2	16	4	13	32	...	296	...	...	31	63	609	...	
1895...		28.9	23.9	1.6	2,179	1,798	287	494	...	1	3	8	65	2	16	28	...	261	...	...	24	68	557	...	
1896...		29.2	22.6	1.2	2,144	1,706	229	477	...	2	2	7	16	1	24	40	...	299	...	...	14	66	619	...	
1897...		27.5	24.7	2.7	2,073	1,858	316	452	...	75	1	3	59	10	9	47	...	260	...	...	22	64	680	...	
1898...		28.7	23.7	1.9	2,160	1,787	235	493	...	3	1	11	25	4	13	86	...	283	...	...	14	75	640	...	
1899...		27.3	26.3	2.8	2,060	1,980	276	525	...	34	1	6	33	5	8	121	...	320	...	...	9	79	749	...	
1900...		25.8	24.2	1.4	1,944	1,821	235	496	...	9	22	4	1	2	5	59	...	281	...	...	7	51	597	...	
1901...	76,122	25.6	23.0	1.9	1,942	1,745	272	440	...	3	17	2	36	11	5	73	...	289	...	...	13	54	558	...	
1902...		26.2	21.5	1.3	2,031	1,667	258	430	...	21	3	—	30	4	5	34	...	287	—	19	65	564	...		
1903...		27.1	19.4	1.3	2,066	1,476	232	336	...	2	4	—	44	4	5	37	...	279	—	15	46	518	...		
1904...		27.4	21.6	1.0	2,089	1,642	249	408	...	8	1	1	27	6	8	27	...	352	—	39	75	563	...		
1905...		27.6	21.7	1.0	2,099	1,650	276	488	...	14	—	2	—	7	8	47	...	103	294	...	—	18	50	605	...		
1906...		27.5	20.2	1.7	2,094	1,535	279	406	...	—	—	4	14	11	5	92	...	65	261	81	62	20	54	593	...		
1907...		25.6	20.6	1.5	1,946	1,570	254	427	...	—	2	6	52	5	4	48	...	77	278	84	77	14	53	609	84		
1908...		27.3	22.3	1.9	2,084	1,700	281	472	...	13	6	6	13	9	16	79	...	62	245	93	59	12	53	651	83		
1909...		26.3	22.1	2.3	2,000	1,680	251	457	...	3	15	5	72	11	15	54	...	106	264	78	62	13	75	673	91		
1910...		25.8	19.3	0.9	1,965	1,469	189	439	...	—	2	3	7	11	13	34	...	71	233	75	73	25	50	630	77		
1911...	76,673	26.0	21.2	1.9	1,992	1,622	277	377	...	17	2	—	28	10	5	78	...	91	252	73	64	28	61	627	81		
1912...		24.8	19.1	0.7	1,903	1,464	204	412	...	6	5	—	11	6	8	18	...	69	231	71	66	16	56	560	58		
1913...		24.2	21.5	1.9	1,853	1,645	263	424	...	16	4	2	—	3	6	114	...	110	202	79	95	14	57	643	60		
1914...		24.3	19.9	2.1	1,897	1,551	226	367	...	9	9	1	64	13	4	67	...	85	231	79	74	15	48	581	60		
1915...		23.1	20.7	1.5	1,778	1,584	235	418	...	14	12	—	22	14	5	49	...	152	211	72	66	13	50	590	79		
1916...		22.6	18.2	1.0	1,732	1,394	182	387	...	6	6	1	11	9	6	35	...	97	189	69	66	14	31	564	51		
1917...		20.2	17.5	0.8	1,562	1,340	169	395	...	—	1	1	14	3	3	34	...	74	202	78	62	24	40	51	60		
1918...		20.8	20.5	2.2	1,599	1,570	189	326	...	88	1	1	27	6	8	40	...	247	187	75	61	20	29	596	43		
1919...		23.8	20.2	1.1	1,825	1,551	183	414	...	1	2	3	7	32	1	40	...	248	156	58	69	19	26	564	50		
1920...		28.3	17.5	1.9	2,169	1,341	173	355	...	2	5	—	40	60	13	22	...	69	159	46	86	30	32	574	59		
1921...	24.6	15.4	1.4	1,887	1,181	144	313	...	—	—	1	1	56	4	1	...	40	125	34	75	71	82	482	59			
1922...	24.2	18.0	1.06	1,853	1,383	173	392	...	38	—	—	—	42	2	—	...	37	128	176	39	70	39	28	571	67		
1923...	25.2	14.0	0.7	2,007	1,071	133	332	...	—	—	1	—	—	23	1	24	...	4	55	130	32	84	23	38	446	42	
1924...	25.5	17.8	1.4	1,990	1,386	175	396	...	—	—	—	—	—	12	2	10	...	25	146	164	32	94	18	29	568	40	
1925...	23.8	15.5	0.8	1,827	1,185	136	397	...	—	2	—	—	—	6	5	45	...	8	60	134	31	92	25	38	457	32	
1926...	78,490	21.5	17.3	2.4	1,687	1,359	220	361	...	75	6	1	32	18	2	53	...	13	116	126	46	82	25	27	501	37	
1927...		21.7	14.7	0.5	1,101	1,152	148	343	...	1	6	—	—	9	2	24	...	17	63	129	35	78	28	27	419	52	
1928...		21.7	15.0	0.8	1,767	1,179	135	398	...	—	—	4	—	8	22	2	23	...	17	80	109	29	101	27	34	459	34
1929...		20.9	16.7	1.4	1,816	1,308	156	404	...	15	3	1	30	33	1	25	...	12	81	141	17	92	26	44	552	42	
1930...		25.4	16.1	1.8	1,998	1,264	155	399	...	22	8	—	—	5	64	—	...	37	5	88	117	25	96	22	36	584	25
1931...		24.4	16.2	0.5	1,921	1,275	138	388	...	—	—	—	—	5	24	1	34	...	34	96	124	46	107	26	24	515	33
1932...		23.0	15.8	0.7	1,819	1,239	183	400	...	1	1	—	18	17	1	46	...	11	82	111	45	98	27	40	607	18	
1933...		23.7	14.9	0.8	1,852	1,168	165	367	...	1	1	—	3	14	†	45	...	20	60	106	19	104	22	43	557	22	
1934...		24.4	14.7	1.0	1,922	1,151	139	403	...	3	2	—	16	25	—	36	...	6	61	107	21	111	21	43	542	13	
1935...		24.8	14.8	0.9	1,945	1,158	1621																				

Table 9.—Showing the number of deaths from the principal epidemic diseases during the past ten years.

Year	Small Pox	Typhus Fever	Typhoid Fever	Scarlatina	Puerperal Fever	Membranous Croup	Diphtheria	Measles	Diarrhoea	Whooping Cough
1933	—	—	2†	—	2	—	14	3	45	3
1934	—	—	—	2	5	—	25	11	36	16
1935	—	—	—	—	1	—	7	7	56	1
1936	—	—	—	7	1	—	8	10	41	5
1937	—	—	—	10	—	—	17	—	52	12
1938	—	—	1*	3	—	—	7	—	33	3
1939	—	—	—	1	1	—	3	—	39	6
1941	—	—	—	1	—	—	5	21	52	—
1940	—	—	—	—	—	—	5	6	36	—
1942	—	—	—	—	—	—	21	—	52	2

* Infection in this case was incurred outside the City area.

† Both these cases had been resident many years in the Mental Hospital (outside City area).

Uncertified Deaths. Ten uncertified deaths were recorded during the year as compared with eighteen in 1941.

Deaths from Violence. In the 25 recorded instances the cause of death was as follows :—

Falls	...	...	6
Drowning	...	...	4
Suicide	...	...	4
Motor Car Accidents	...	...	4
Burns	...	...	1
Miscellaneous	...	...	6

Table 10.—INFANT DEATH RATE.

Year	Births	Deaths under 1 year	Deaths per 1000 Births	Year	Births	Deaths under 1 year	Deaths per 1000 Births
1881	2167	271	124	1912	1903	204	107
1882	2212	283	127	1913	1853	253	136
1883	2161	236	109	1914	1897	226	119
1884	2199	253	110	1915	1778	235	132
1885	2054	247	120	1916	1732	182	105
1886	2037	225	110	1917	1552	169	108
1887	2042	252	123	1918	1559	189	118
1888	2058	288	139	1919	1825	183	100
1889	2023	253	125	1920	2169	173	79
1890	2005	214	106	1921	1887	144	76
1891	2024	281	138	1922	1853	173	93
1892	1978	297	150	1923	2007	133	66
1893	2092	268	132	1924	1990	175	87
1894	2063	310	150	1925	1827	136	74
1895	2179	287	131	1926	1687	220	130
1896	2144	229	106	1927	1701	148	87
1897	2073	316	152	1928	1764	135	76
1898	2160	285	131	1929	1816	156	85
1899	2060	276	133	1930	1998	155	77
1900	1944	235	120	1931	1921	138	71
1901	1942	272	139	1932	1819	168	89
1902	2031	258	127	1933	1852	165	89
1903	2066	232	112	1934	1922	139	72
1904	2089	249	118	1935	1945	162	83
1905	2099	276	131	1936	1921	154	80
1906	2094	279	133	1937	1818	187	103
1907	1946	254	139	1938	1708	129	76
1908	2084	281	134	1939	1711	125	73
1909	2000	251	125	1940	1670	153	92
1910	1965	189	96	1941	1680	142	85
1911	1992	277	139	1942	1706	171	100

Section. III.—Infectious Diseases

The following diseases are compulsorily notifiable in this area :—

Small Pox	Acute Influenzal Pneumonia
Cholera	Malaria
Typhus	Dysentery
Typhoid (Enteric Fever)	Encephalitis Lethargica
Simple Continued Fever	Varicella
Scarlatina	Cerebro Spinal Fever
Puerperal Fever	Poliomyelitis
Diphtheria	Ophthalmia Neonatorum
Membranous Croup	Pemphigus Neonatorum
Erysipelas	Puerperal Pyrexia
Measles	Trachoma
Diarrhoea	Undulant Fever
Acute Primary Pneumonia	Whooping Cough

The last six diseases were made notifiable by the Public Health (Infectious Diseases) Regulations 1941.

The Infectious Disease (Notification) Act, 1889, was by a resolution of the Corporation, dated 7th February, 1890, adopted in the County Borough.

The Act was subsequently made to apply to the following diseases :—

Name of Disease		Date of Resolution making Act applicable	Period in force
Cerebro-Spinal Meningitis	...	13 July, 1900 ...	Till 31st December, 1900
do.	...	22 February, 1907	Till revoked
Measles	...	26 May, 1905 ...	do.
Diarrhoea	...	14 December, 1906	1 July, 1907, to 31 Oct., 1907
do.	...	12 February, 1909	1 July, 1909, until revoked
Poliomyelitis or Infantile Paralysis	...	10 November, 1916	Till revoked

The Infectious Disease (Prevention) Act, 1890, was, by a resolution of the Corporation, dated 11th March, 1892, adopted and put into force in the County Borough.

The Public Health Acts Amendment Acts, 1907, was adopted and put into force by a resolution dated the 24th January, 1908, save as regards Sections 21, 24 to 33, 48, 66, 78 to 86, and 91 to 95.

The Public Health (Ireland) (Pneumonia, Malaria, Dysentery, etc.) Regulations, 1919 were revoked and are replaced by "The Public Health (Infectious Diseases) Regulations, 1929." Trench Fever, which was included in the 1919 Regulations, has been withdrawn in the new order.*

The Emergency Powers (No. 46) Order, 1940 still remains in force. The provisions of this Order were fully reported on in the 1941 report.

The total number of notifications received during the year was 919 as compared with 799 in 1941. The epidemic of diphtheria accounted for practically the whole of this increase (372 cases as compared with 62 in the previous year). Whooping Cough (which became notifiable for the first time during the past year) accounted for 95 of the notifications. On the other hand there were very substantial reductions in the notifications of measles (1 case only as compared with 94 in 1941) and varicella (65 cases as compared with 254).

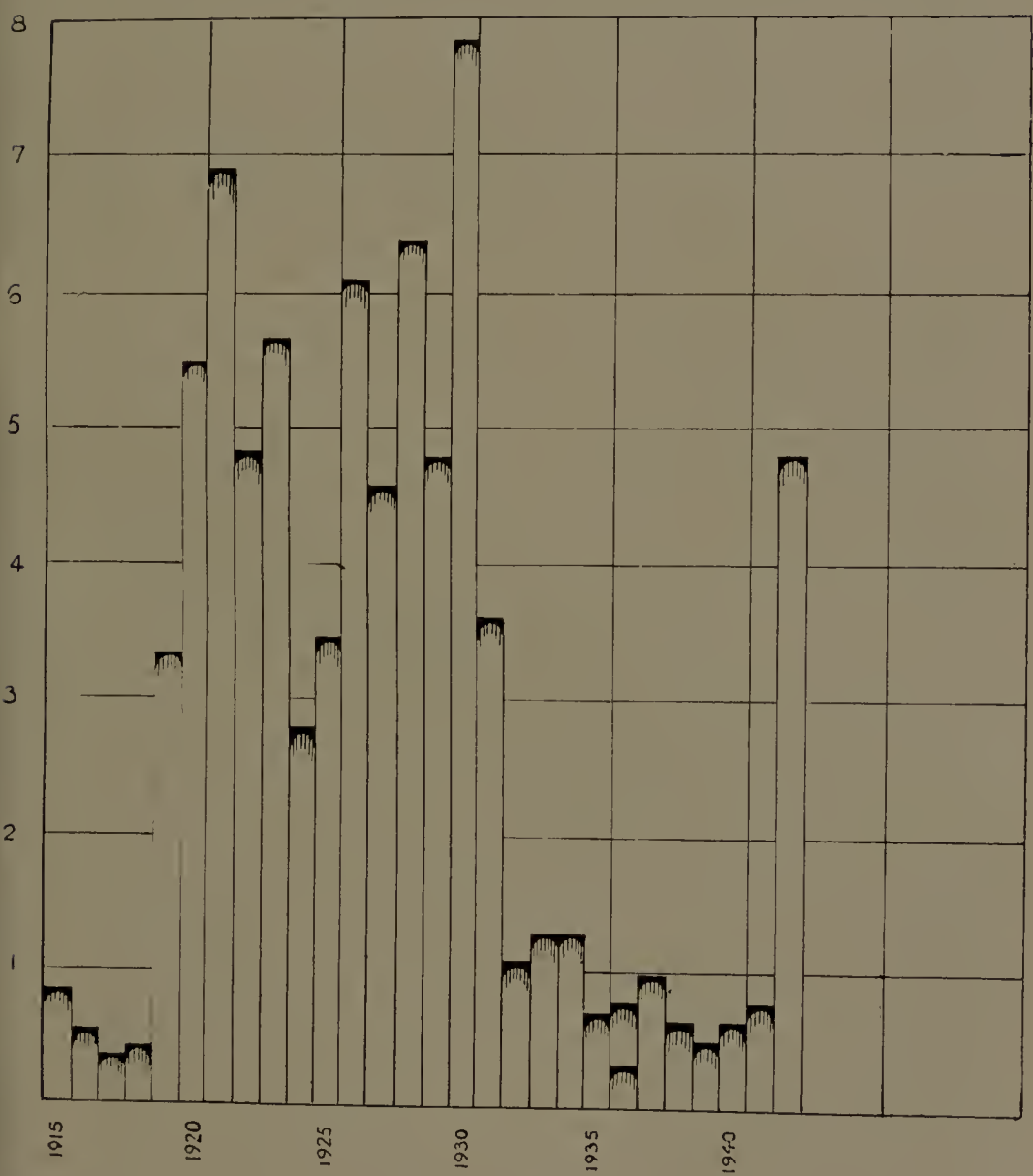
DIPHTHERIA.

It will be noted from the figures in the appropriate tables that there has been a distinct tendency towards increased incidence during the past year or two which, as I have often before pointed out, is characteristic of what happens when attendances at the immunisation clinic falls off. In such circumstances, while sporadic cases of diphtheria continue to recur, it is merely a question of time as to the occurrence of another major outbreak. This is due to the building-up of an unprotected community of children in which the proportion of immunes falls to a very low level and this is what has been happening here for a number of years. Facilities for protection against diphtheria have been in existence in this area for the past fourteen years consequently the blame for such deaths as occur must fall entirely upon these parents who have been so negligent as not to avail of them.

This extract is from last year's report. While it was obvious that a major epidemic would make its appearance sooner or later, taking into consideration the prevalent indifference to immunisation, there was no reason to suspect that it would commence so soon or that it would spread so rapidly as the disease did during the past year. Parents and the public generally have been warned again and again both in these Reports and in the public press of the consequences of neglect in the protection of their children, but notwithstanding such warnings the great majority of them continued indifferent, with the consequences we now know. The epidemic which is now reported may not have been as large or as virulent as some of those reported in former years but, nevertheless, it has been of definitely major dimensions. The total number of reported cases amounted to 372 (compared with an average of 58 for the previous five years). The largest number recorded cases was in 1930, when 627 were reported. The complete record of cases is set out in Table 12 from which it will be noted that, apart from the year just referred to, there were six occasions on which the total for this year was definitely exceeded. It shows also the genesis of increased incidence of the disease in this area commencing in the year 1919 and

* These Regulations are now revoked and replaced by the Public Health (Infectious Diseases) Regulations, 1941.

FIG. II—DIPHTHERIA. INCIDENCE (PER 1,000 POPULATION) FROM 1915.



lasting with varying degrees of intensity until the end of 1931 when, it has been assumed, the effects of immunisation began to become operative. In addition to fluctuations in incidence this table too reveals the fluctuations in virulence. These variations have been quite marked. The highest fatality rate was in 1902 when it reached the figure of 50 per cent, but that was very shortly after the introduction of anti-toxin when, possibly, its administration was not properly understood and, besides, the actual number of cases was very small (a total of eight). In more recent times, we note, a fatality rate of 32 per cent in 1936 among 25 cases. Perhaps the worst year was 1920 when 60 out of 428 cases died yielding a rate of 14 per cent, while 1934 with 109 cases and 25 deaths also stands out very significantly. From this point of view the recent epidemic* has had this consoling feature that the mortality has been low. 21 deaths were recorded, that is a fatality rate of 5.6 per cent.

We refer now to 21 deaths of children and speak of the mortality being low. We even say that this is a consoling feature. To refer to deaths (however few) in such terms is of course a euphemism the incongruity of which only becomes fully apparent when we consider all the facts of incidence and mortality in diphtheria and their relation to immunisation. Reference to table 13 shows us that during the years from the middle of 1929 down to the end of 1942 over 22,000 children have been dealt with at the clinic, comprising those who were found to be either Schick negative on their first visit or who received the full course of treatment (this total would be increased to over 25,000 if we considered also those who only received partial treatment). It is not denied that some of these children developed diphtheria (some of them have already been dealt with† and the remainder will be, it is hoped, when circumstances permit). *The one outstanding fact about this relatively very large group is that so far not a single child has died from diphtheria.* This is to my mind a complete justification for the method. There is no form of immunisation known to medical science which affords full and complete protection for life. Apart from diphtheria the two classical examples are protection against small-pox by vaccination and against typhoid. The results of the former have been of profound social significance over the past hundred years and, in the aggregate, have effected an immense saving in life. Yet we know that the protection afforded by it is not permanent and that it has to be repeated occasionally if a lasting effect is desired. We know too that there are certain individuals who lose their protection more rapidly than the great majority and that they are liable to contract the disease if subsequently exposed. On the other hand, in such cases, there is present that feature referred to above in connection with diphtheria, that when the disease supervenes it generally does so in a relatively mild degree and with a low fatality rate. In other words although immunisation may not always protect against the disease itself it certainly affords a tremendous degree of protection against *death* from it.

* The application of *recent* to this epidemic is scarcely correct in the strict sense of the word since even at the time of writing it has not yet completely died out.

† Irish Journal of Medical Science, Nov., 1933.

These known facts concerning immunisation against disease in general apply too to diphtheria and much emphasis is added to the above observations when we consider the reverse side of the picture—our experience in regard to deaths among children who have not been immunised. These have been totted-up each year and adding the quota of 21 for 1942 to those of the previous eleven years (which brings us back to 1930—the year after immunisation was introduced) we have the sombre total of 191 children dead from this disease. What is to be said about this? Is it ignorance or lethargy or the result of the propaganda of misguided zealots? Whatever the source the effect is deplorable. It seems to be impossible to bring home to the majority of people their responsibilities in such matters and still we have had ample personal experience of the remorse of parents whose children have died from diphtheria. If any means could be devised to bring the feelings of such parents to the notice of the indifferent individuals the efforts of propagandists would not survive long. It is an unfortunate fact that, only when confronted with the actual danger, can most parents be roused from their indifference. The past year has been no exception to this rule. Reference to the appropriate tables in this section shows us, on the one hand, the gradual diminution in the cases of diphtheria over a number of years and, on the other, the falling-off in attendances at the immunisation clinics. The disease made its appearance in epidemic form gradually and almost imperceptibly at first, a few deaths occurred and suddenly those concerned became alive to what was happening and in a way which no amount of previous warning was able to effect. These various manifestations became apparent early in the year and were reflected in greatly increased attendances at the clinics. The largest number of cases dealt with at individual session was 550 (19th June) and in one week 702. There were corresponding figures at other periods. Such numbers could not be coped with by the ordinary staff and it was necessary to augment this by the appointment of an additional doctor (and subsequently of a second) and by pressing into service other members of the staff to help on the clerical side and in regulating traffic (which at times became quite an arduous undertaking). The various tables in this section set out the number of *cases* dealt with during the year but they do not indicate the amount of individual attendances. These amounted to over 15,000 which was far and away greater than any recorded in any previous year. In this connection I have to pay a well deserved tribute to the hard work put in by the staff pressed into service for the emergency, every one (nurses, clerks, sanitary inspectors) gave the fullest assistance and it was only their willing co-operation which made it possible to deal with such extraordinarily large numbers of children. I cannot speak too highly of the help received from this quarter.

There is another side to this picture, however, which makes it necessary to refer once again to the deplorable indifference of parents during the inter-epidemic period. One can look back with satisfaction on the extraordinary record of hard work and willing co-operation between all concerned which made this achievement possible but it is quite wrong that such a very exceptional effort should have been called for at all entailing, as it did, a marked disruption of the ordinary routine work

of the department and placing a heavy strain on everyone concerned. It illustrates again the inability of people to distinguish between knowledge and realisation. No doubt the vast majority know the dangers of diphtheria but they are apparently quite unable to realise them until they stand face to face with them. It seems unlikely that there will be any material alteration in this attitude of mind and it brings to the forefront the question of compulsion in connection with diphtheria immunisation. Much as one may deprecate the principle of compulsion in such matters one must consider the general good. There is not the slightest reason to doubt that if vaccination had not been made compulsory small-pox would still be one of the major scourges of mankind. It is prevalent to-day only where compulsory laws have been relaxed and is entirely absent from countries in which these laws are rigidly enforced, despite the upheaval caused by the world war. We are gradually approaching the position here in which this question must be seriously considered and there is scarcely any doubt as to the attitude of a reasonably intelligent person who has examined all the evidence. It should be made quite clear that immunisation does not claim 100 per cent protection for 100 per cent of those treated, but it is quite manifest that the communal benefit is immense. Taking our own relatively small figures into consideration and having regard to the fact that out of a group of 22,000 children over a period of fourteen years there has not been a single death from diphtheria; how can any reasonable person claim that immunisation is of no benefit to the community? While I am not in the position to adduce definite figures for the claim I think I do not exaggerate when I say that of every 1,000 children immunised at least 900 will be protected *absolutely* from incurring the disease; while of the remaining 100, at least 99 will be protected against *death* from it. These are rough and ready figures which do not pretend to absolute statistical accuracy but I believe that they represent the facts.* Even if only approximately true (and they are at least that) they are incontrovertible evidence in favour of an extension of immunisation to the community generally.

With regard to the epidemic itself, it is difficult to say when it made its actual appearance, possibly during the latter weeks of 1941. Certainly cases were being reported each week from the beginning of 1942, six the first week followed by one, two, one respectively during the ensuing three weeks (an average of approximately three per week) not an excessive number. During the next month the average was slightly smaller (2.2 per week) representing a total of 10 cases. The next month showed a very definite increase when the total jumped to 27 and this period may be said to have ushered in the epidemic proper. From now on, with occasional marked fluctuations the reports exhibited a mounting total until a maximum was reached during the month ended 31st October when 61 cases were notified. From this point a tendency to diminish

* Confirmation of this assumption is now forthcoming. Sir Alexander Russell, Department of Health for Scotland at a meeting of the section of epidemiology of the Royal Society of Medicine, 25th May, 1943, reporting on 800,000 children immunised in Scotland stated that the immunised child was eight times less liable to attack, and in the pre-school group twenty times less liable. More striking was the fact that the immunised child was more than a hundred times less liable to die of the disease if he contracted it. (The Lancet, June 12th, 1943., p. 741.).

became apparent. The total during the following month was 55 and for the last four weeks of the year 35. This decline was more apparent than real, for the first four weeks of 1942 showed a sharp increase to 45 cases followed by 56 in the period ended 20th February from which the disease has since exhibited a further tendency to decline although at the time of writing there has not been any week since the beginning of the year without its quota of notifications averaging about 7 cases a week. The role of schools in spreading the infection was quite marked in the fall of incidence which characterised the summer vacation. During this period the average of cases fell to 3.4 per week. During the week ended 5th August there were but two and one only in the following week. From this on there was a steady crescendo reaching its maximum effect during the week ended 31st October which was the peak period. There followed an equally steady decline to the end of December followed by a sharp rise at the beginning of the New Year.

There is evidence too that the schools played a predominant part in initiating the outbreak. Early in the year quite a number of notifications reached the Department concerning children in a single school in the northern part of the City and further investigation revealed that these were largely confined to one class. 85 children in this class were swabbed and eight regular attendants were found to be carriers. These children were of course excluded and in a short time the number of cases from this particular school returned to normal. This incident occurred during the latter weeks of April and the first two weeks of May. Later, early in June, there was a similar sharp increase from a school in the southern area. This was of interest for it was the very first indication of epidemic prevalence in this, the best immunised area in the City. Prior to this the freedom of the southern side had been remarked for, while notifications were coming in freely from other districts, this remained clear of the disease. One or two isolated cases had been reported previously and naturally this increased incidence attracted attention. As in the case of the former school it was early apparent that but one class was implicated and here again a number of virulent carriers were detected (14 out of 54 swabbed). A matter of further interest came to light in connection with the investigation of this incident. It was noticed that some of the rooms in the school, a newly erected building, were considerably overcrowded. Enquiries elicited that the older building had been closed down for structural alterations and that the various classes had been transferred to the new portion. The result of this was gross overcrowding in many of the class-rooms. This overcrowding reached as much as 100 per cent over the allowable minimum in some cases. It was decided to close down the whole infant department at once and this had the immediate effect of terminating the epidemic so far as this particular school was concerned. The period of closure carried over to the summer vacation at the end of which period the old building was again in commission.

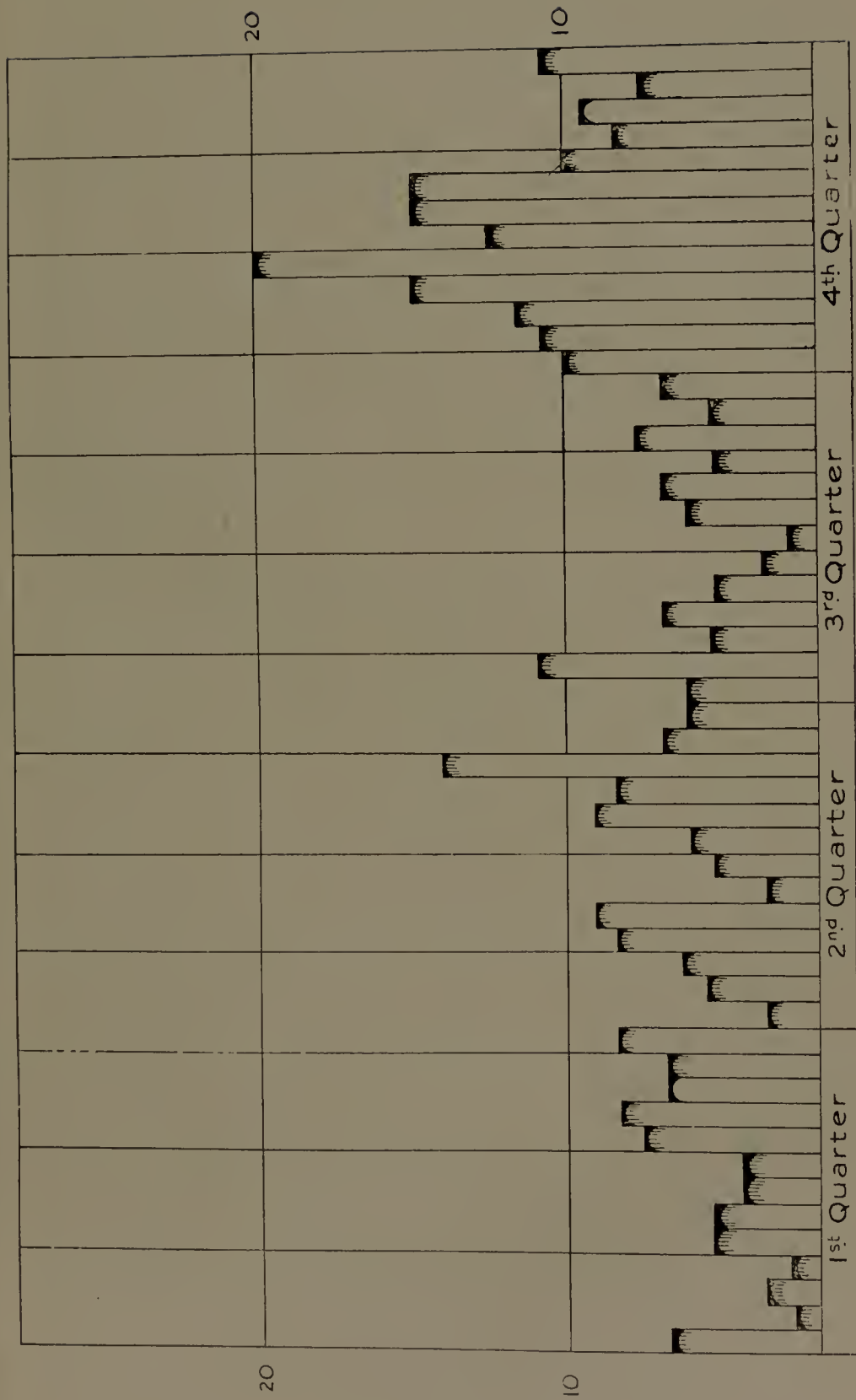
These two incidents illustrate the preponderant role of schools in spreading infectious diseases and especially those in which there is insufficient floor space with resultant defective ventilation. It is to be feared that these conditions are all too prevalent in many schools.

They may not be always apparent on inspection or indeed from an examination of the available floor space in the buildings but they become effective even in the best schools when for any reason two or more classes are combined in a single room or when (as appears to be the custom) the children are brought forward and nearer to the teacher for the purpose of talks. In such circumstances, it is well known, that the spread of infectious disease by droplet infection comes into play with increased effect. To those who are conversant with the mechanism of droplet infection this is a matter which sets no problem whatever but it may well be asked; how many teachers and school managers understand it? It raises a very important question in regard to the teaching of elementary hygiene to intending teachers during their course of training. One or two lectures on the mechanics of infection would certainly give them a much clearer conception of the risks inherent in overcrowding classrooms and would react to the benefit of everyone concerned. Now that it is possible to give ocular demonstration of the manner in which infection is so spread there should no longer be any difficulty in impressing upon teachers the great danger to health incurred by crowding too many children into a single room, the importance of adequate lighting and ventilation and of periodically emptying such rooms and throwing the doors and windows wide open in the periods between occupation. There is another very important point too which follows from this discussion. Recent work has thrown considerable light on the part played by the disturbance of dust on floors in the spread of infection. The bacteria which are projected into the atmosphere during the acts of coughing, sneezing and even of talking (the so-called droplet infection) remain suspended in the air for varying periods depending upon the size of the droplets but eventually they come to rest on the floors and will remain there if undisturbed. But when such floors are brushed or otherwise disturbed these bacteria are sent into re-circulation in the atmosphere and may cause infection. It has been shewn that the application of an oily dressing to the floor prevents almost entirely the dispersion of dust during sweeping or other operations and so brings about a corresponding reduction in the risk of infection. An added advantage is that in rooms so treated the amount of residual dust remaining on shelves, tables, books, etc. is almost negligible in comparison with that resulting from the old-fashioned, unhygienic method of dry sweeping with its accompanying clouds of dust. Recent bacteriological work has amply confirmed the claims advanced for this method when it was introduced a considerable number of years ago and which has now become a *sine qua non* in hospitals, barracks and similar institutions in which large numbers of people are gathered together and in which spread of infection is likely to occur. I endeavoured to introduce the method in one or two schools some years ago with, it is to be regretted, no success whatever. The authorities did not like the appearance of the floors! Yet any observant citizen may note for himself that the one business house in the city which deals with the greatest number of patrons has since its inception used this method. One may be tolerably certain that when the directors of this concern (a branch of a great chain stores) decided to adopt it they were not so much concerned with conserving the health of people as reducing the cost of keeping their goods free from dust. It is of interest too to note that the one institution

in which my efforts were successful has used it ever since with an enormous reduction in the effort necessary to keep its very large stock of books free from dust. I raise these matters here because they are not only germane to the subject but also because I believe they are of considerable importance in the limitation of infectious disease. Such matters are of fundamental importance to the health of the community and it is necessary, especially, that they should be brought to the notice of those responsible for the education of our children. Let it not be forgotten that education is compulsory. Willy-nilly parents *must* send their children to school, if they do not the state penalises them in a way that leaves them no choice in the matter. A glance at the statistical records shows us that it is during school life that children are most exposed to the risks of the more dangerous infectious diseases. There is clearly therefore a moral obligation on the state to see that their environment while at school is as free from such danger as it is possible to effect by human agency.

Reverting to the two incidents which initiated this discussion, it will have been noted that in each of the classes concerned swabbing was carried out with the result that a number of carriers were detected. In the first school the number of such carriers was eight out of a total of seventy-five children examined. In the second the number was fourteen out of fifty-four. In both instances the quarantining of these carriers was effective. It would follow from this that a widespread effort to detect such children is a desideratum in dealing with an epidemic such as we have been experiencing. Theoretically this is so, of course, and the absence of the necessary facilities is a serious handicap. It raises the question of the provision of adequate facilities for dealing with such emergencies in the future. The number of swabs submitted by this department for examination during the past year was far in excess of any previous year. The total amounted to just over 3,500 (in comparison with 2,800 in 1930, when we experienced our maximum incidence of diphtheria with 627 cases). The cost of such examinations in 1942 was £670 as compared with £363 in 1930 the previous highest total. The high cost of this service is undoubtedly a most serious drawback to the control of diphtheria especially in epidemic periods. When it first became apparent an approach was made to the laboratory authorities requesting a reduction in the charges in view of the exceptional number of specimens which were being submitted. This was met with a curt refusal accompanied by a reference to the original terms of agreement, an agreement drawn up during a period of normal incidence and when the control of diseases such as diphtheria was not fully understood. Our efforts to control the disease have been greatly limited by this factor. If the question of cost did not arise the practice of swabbing of contacts could have been more widely practised and the virulence test much more frequently resorted to. In view of what has been said it is clear that the time has now come to consider the setting-up of a municipal laboratory in conjunction with adjacent local authorities to which the Public Health authorities could have access at a reasonable cost. Such a service would greatly ease the burden of control of diphtheria in epidemic periods. There would remain however the problem of disposing of all the positive contacts

FIG. III—DIPHTHERIA. WEEKLY NOTIFICATIONS, 1942



detected. Certainly they could be excluded from school and we know that this has been of good effect—such carriers are of far less danger to the community when free to move about in the open than when they are confined to class-rooms often badly ventilated and often very much overcrowded and especially when they are under the control of the public health department, admittedly limited though it be. The number of such carriers in epidemic times is such as to preclude the possibility of segregating all of them and we are therefore thrown back upon the only logical remedy which is the mass immunisation of the whole community with subsequent testing and re-testing during the period of school life. The two methods are, of course, complementary and it would seem clear enough now that until such time as they are enforced we can never completely control the incidence of diphtheria.

In Table II the age incidence and deaths from diphtheria during the past year are analysed. It has only been possible to allocate the former so far the total number of notifications is concerned. Owing to the fact that the age-sex constitution of the population is not available It has not been possible to estimate the age incidence in the various groups. One very marked feature of the epidemic was the large number of adolescents and adults who were attacked. It will be noted that from 15 years upwards there were 52 cases and, of these, 22 were over 25 years of age. This is quite exceptional. The deaths were all confined to children under 10 years.

Table II.—Analysis of cases and deaths.

Age Groups	CASES		DEATHS
	Number	Proportion of Total	Number
0-2 years	8	2.15 per cent.	5
2-4 „	46	12.10 „	5
4-6 „	71	19.08 „	2
6-8 „	77	20.89 „	5
8-10 „	62	16.76 „	5
10-15 „	56	15.05 „	—
15-25 „	30	8.06 „	—
25 & over	22	6.00 „	—
Total ...	372	100 per cent.	22

The incidence (per 1,000 of population) and the case-fatality rates of diphtheria from 1890 to the present year are set out in Table 12.

In a proportion of cases the reports received transpired not to be diphtheria. The actual number was 94 (approximately 20 per cent. of all notifications received). The age distribution of these was as follows :—

0-2 years	...	...	...	11 cases
2-4 ,,	...	...	...	18 ,,
4-6 ,,	...	...	...	14 ,,
6-8 ,,	...	...	...	6 ,,
8-10 ,,	...	...	...	9 ,,
10-15 ,,	...	...	...	16 ,,
15-20 ,,	...	...	...	6 ,,
Over 20 ,,	...	...	...	14 ,,
Total				94

Table 12.—Incidence and Case Fatality of Diphtheria from 1890 to 1942.

Year	Cases	Rate per 1000 Population	Deaths	Fatality Rate
1890	20	0.26	8	40.00
1891	37	0.49	11	29.97
1892	11	0.14	3	27.27
1893	18	0.23	3	16.66
1894	14	0.18	4	28.57
1895	6	0.07	2	33.33
1896	7	0.09	1	14.28
1897	21	0.27	10	47.61
1898	18	0.23	4	22.22
1899	18	0.23	5	27.77
1900	23	0.30	2	8.66
1901	26	0.34	11	42.30
1902	8	0.10	4	50.00
1903	17	0.22	4	17.53
1904	29	0.38	6	20.60
1905	18	0.23	6	33.33
1906	37	0.48	11	29.73
1907	37	0.48	5	13.51
1908	40	0.56	9	22.50
1909	66	0.86	11	16.66
1910	51	0.65	11	19.29
1911	70	0.91	10	14.28
1912	52	0.67	6	11.54
1913	24	0.31	3	12.50
1914	54	0.70	13	24.07
1915	68	0.88	14	20.59
1916	43	0.55	9	20.93
1917	26	0.33	3	11.53
1918	34	0.43	6	17.64
1919	262	3.37	32	12.21
1920	428	5.50	60	14.02
1921	541	6.93	56	10.37
1922	379	4.86	42	11.08
1923	440	5.68	23	5.18
1924	217	2.85	12	5.40
1925	265	3.50	6	2.19
1926	469	6.10	18	3.75
1927	344	4.55	9	2.52
1928	385	6.37	19	4.75
1929	369	4.81	32	8.46
1930	627	7.86	59	10.00
1931	288	3.66	24	8.61
1932	85	1.08	17	20.00
1933	109	1.32	14	12.83
1934	109	1.32	25	22.10
1935	56	0.71	7	12.50
1936	25	0.31	8	32.00
1937	80	0.99	17	21.20
1938	54	0.66	7	12.77
1939	41	0.50	3	7.40
1940	52	0.67	5	9.61
1941	62	0.80	5	8.06
1942	372	4.84	21	5.64

Note :—The Infectious Disease (Notification) Act, 1889, was adopted on 7th February, 1890.

DIPHTHERIA IMMUNISATION.

Reference has already been made to the increased attendances at the immunisation clinic as a result of the epidemic. The figures are shown in the following table. The total number of children who completed the full course of treatment was just over 4,000. This is considerably larger than the previous highest (3,011 in 1930) and greatly in excess of the average figure during the intervening years. It will be noted that there were 891 children who did not complete the course. In addition to these two sets of figures there were 1,818 children who had been previously treated and who came up for re-test and further treatment where necessary. There was, therefore, a grand total of 6,871 cases attended to during the year involving 13,055 attendances at the clinic.

Table 13.—Attendance at Diphtheria Prevention Clinic.

Year	Primary Schick Negative	Completed Full Course	Total	Not Completed Course
1929	—	1,802	1,802	—
1930	154	2,857	3,011	505*
1931	324	1,777	2,101	436
1932	91	422	513	208
1933	159	592	751	61
1934	826	1,716	2,542	432
1935	173	1,118	1,291	8
1936	458	1,741	2,199	22
1937	165	960	1,125	212
1938	106	708	814	205
1939	87	355	442	69
1940	87	552	639	90
1941	109	576	685	60
1942	367	3,795	4,162	891
Totals	3,106	18,971	22,077	3,199

* Includes figures for *both* 1929 and 1930.

The figures for primary Schick tests in this table do not, of course, represent the *total* number of such tests performed but merely the number that proved *negative*. They are stated here for the purpose of estimating the number of children who have passed through our hands and who may be regarded as presumably immune. The number of primary tests has been reduced to a minimum. It is now confined to children over seven years. The great bulk of our cases are now under this age, so that the necessity for the primary test is comparatively rare.

Table 14.—Primary Schick Tests performed during 1942.

Age Group	Number of Cases	Positive	Negative	Proportion Positive
0-5 years	12	3	9	25.0 %
5-10 "	210	95	115	45.2 %
10 and over	464	221	243	47.6 %
Totals ...	686	319	367	46.5 %

Table 15.—Primary Schick Tests, 1929–42. Analysis showing proportion positive in each year.

Year	Number Tested	Positive	Negative	Proportion Positive
1929–30	1170	916	254	78.2 per cent.
1931	598	274	324	45.8 „
1932	301	210	91	69.7 „
1933	435	276	159	63.4 „
1934	1474	648	826	44.0 „
1935	309	136	173	44.0 „
1936	626	168	458	26.8 „
1937	266	101	165	38.0 „
1938	152	46	106	30.2 „
1939	110	23	87	20.9 „
1940	131	34	87	25.9 „
1941	146	37	109	25.3 „
1942	686	319	367	46.5 „

Apart from record purposes this table is of little value as, obviously, the proportion of *positive* reactions will depend almost entirely on the age constitution of the groups of children tested and as this factor will fluctuate widely from year to year, so also will the results vary from one year to another. In this respect the next table is much more informative as the results in the different years have been analysed in accordance with the age groups of the children.

Table 16.—Primary Schick Tests, 1929–42. Analysis of proportion positive each year in different age groups.

Age Group	Proportion POSITIVE (expressed as percentages)													
	1929-30	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	
0-5 years	—		88.4	79.7	65.8	66.6	66.6	—	—	50.0	25.0	—	25.0	
5-10 „	—	—	60.1	63.3	44.2	49.5	41.5	43.8	25.0	28.6	20.4	30.9	45.2	
10 and over	—	—	37.7	28.9	27.5	30.3	15.5	33.0	35.7	18.4	32.9	22.2	47.6	
Whole Group	78.2	45.8	69.6	63.4	44.0	44.0	25.2	37.9	30.2	20.9	25.9	25.3	46.5	

Owing to the smallness in the number of cases tested, no results can be adduced for the figures for the years 1937 to 1941.

The total number of cases dealt with, according to age-groups is shewn in the following figures.

(1) Treatment Incomplete—

0–5 years	...	...	391
5–10 years	...	...	335
10 and over	...	...	165
			— 891

(2) Treatment Complete—

0–5 years	...	...	2,447
5–10 years	...	...	1,090
10 and over	...	...	258
			— 3,795

Total New Cases Treated	...	...	4,686
No. of Primary Schick Negatives	...	...	367
Old cases tested and treated	...	...	1,818
			—
		Total	6,871

Table 17.—Secondary Schick Tests, 1930–1942.

Year	Total	Negative	Positive	Proportion Negative
1930	805	752	53	94.6 per cent.
1931	1166	991	175	85.2 "
1932	913	858	55	92.8 "
1933	893	801	92	89.0 "
1934	1105	1058	47	95.7 "
1935	1405	1388	17	98.8 "
1936	1272	1259	13	98.9 "
1937	732	722	10	98.6 "
1938	581	498	83	85.7 "
1939	215	205	10	95.3 "
1940	353	350	3	99.1 "
1941	488	464	24	95.0 "
1942	2,409	2,248	161	93.3 "
Totals ...	12,337	11,594	643	94.2 per cent.

Alum-precipitated toxoid (A.P.T.) and toxoid anti-toxin floccules (T.A.F.) were the prophylactics used. The former was administered by the two-dose method (0.1 c.c. followed by 0.5 c.c.) and the latter in three doses of 1 c.c. each at intervals of a fortnight or three weeks.

It will be noted that the number of secondary Schick Tests also was considerably in excess of that of any previous year. This test has been held to be an integral part of any immunisation scheme and, despite the pressure of work, no relaxation in this standard was permitted during the past year. It will be noted that there was a high level of negatives (93.3 per cent). In urban areas there does not seem to be any case for dispensing with the post-treatment test. The position is different in rural areas where the administration of an immunisation scheme is greatly hampered by the distances which have to be covered, more especially in view of the present transport difficulties one can readily allow for its not being carried out. The very fact that there will always be a certain number of children who do not respond to the normal course of treatment is sufficient justification for stating that the test is indispensable in town areas. Such children are very much exposed to infection and if they contract the disease much harm may be done by unjustifiably regarding such cases as evidence of the failure of diphtheria immunisation. Even with this test it has to be borne in mind that the protection afforded by a normal course of treatment is effective only against normal or average infection. There are times when the infective dose of bacteria is greatly in excess of the average as, for instance, in the case of massive infection or during epidemic periods when the virulence of the causative organism becomes greatly exalted. I have alluded above to the fact that a number of immunised children contracted diphtheria during the year, this in itself is evidence of the facts just mentioned and led to a modification in our technique in dealing with children who had been immunised three or more years and who presented themselves for a further test. In view of the intense invasiveness of the prevalent organism it was decided to combine the test with a further injection of T.A.F. (1 c.c.) in order to bring about an

immediate increase in the resisting powers of such children. The prophylactic was administered at the same time as the test. The latter was read at the end of one week and in quite a number of cases the result was quite definitely positive, these cases were forthwith given a further dose of T.A.F. This may not be strictly correct procedure, one would of course prefer to wait for a fortnight or three weeks before giving the second injection but we were influenced by several factors not the least of which was our experience in the failure of such cases to turn up again for treatment (it is regretted that pressure of work has made it impossible to analyse the records of these cases). In every instance in which a course of treatment has been completed a certificate is issued on which it is prominently indicated that the child should be brought up again after a period of three years for a further Schick test. This is considered to be an integral part of any scheme of immunisation for we now know that in every batch of children treated there will be a certain small proportion in which the basic immunity will lapse in the course of time. In view of all the known facts it is impossible to escape from the conclusion that Schick testing is an essential part of any scheme of immunisation.

SWAB EXAMINATIONS.

The following figures indicate the number of swabs examined in connection with the control of diphtheria since 1928. It will be noted that (with perhaps the exception of 1930) there was no parallel for the year 1942.

Year	No. Examined	Year	No. Examined
1928	980	1936	633
1929	1,353	1937	1,092
1930	2,872	1938	1,124
1931	1,936	1939	714
1932	1,022	1940	747
1933	878	1941	711
1934	1,203	1942	3,509
1935	924		

EPIDEMIC DIARRHOEA.

In referring to this disease in former reports I have had occasion to draw attention to the fact that in many instances there was clearly a doubt as to the true nature of the condition from which the infants had been suffering. The reports in these cases shewed that the cases were occurring evenly throughout the year without preference for any particular season. One was therefore forced to the conclusion that the diarrhoea from which the children had suffered was not true epidemic enteritis but enteritis due to unsuitable dietary. There was no such doubt about the epidemic reported in 1942. This was typical summer diarrhoea and exhibited all the classical manifestations of that disease occurring with explosive violence in the month of August, continuing into September and tailing off gradually in October. 227 cases were notified and 59 deaths recorded, equivalent to a fatality rate of 22.9 per cent. Of the 59 infants who died 49 were under one year and these

constituted the highest contributory factor so far as infantile mortality for the year is concerned (premature birth and congenital debility came second with 48 deaths). Enteritis undoubtedly constitutes the most serious remediable factor in our statistics of infant mortality and has not yielded in any material degree to the measures applied against it. Once again the factor of artificial feeding has come to the fore, a practice which has been repeatedly referred to and which unfortunately continues to be the main cause of infant mortality in this area. The following table in which the particulars are set out speaks for itself.

Year	Number of Cases according to Manner of Feeding			Cases Untraced	Total
	Breast	Cow's Milk	Dried Milk		
1935	18	128	6	26	178
1936	7	198	5	16	261
1937	18	204	8	51	246
1938	14	108	5	15	142
1939	9	148	13	27	197
1940	13	202	9	62	286
1941	4	173	6	35	218
1942	11	168	24	24	227
Totals ...	94	1329	76	256	1755

Of the 203 cases *traced and investigated* 192 (94.5 per cent) were artificially fed. We have no reliable statistics as to the actual numbers of children at risk who were bottle-fed or breast-fed and accordingly one cannot make a definite statement as to the part which this practice played from the above figures but it is clear enough that it must have been a decisive factor. It is proposed to revert to this factor at a later stage and to proceed now to an analysis of the cases as to the time of their occurrence. Hitherto there has been a distinct tendency towards a more or less uneven distribution throughout the year with a bias towards the warmer months of late summer. As shewn in the following figures in 1942 the preponderance of the cases in August and September was very pronounced indeed and indicates a marked climatic factor. The distribution of cases and deaths was as follows:—

Month	Cases	Deaths	Month	Cases	Deaths
Jan. ...	6	2	July ...	15	3
Feb. ...	6	1	Aug. ...	75	8
March ...	2	2	Sept. ...	72	17
April ...	4	3	Oct. ...	33	7
May ...	2	1	Nov. ...	7	2
June ...	2	2	Dec. ...	3	4

The distribution according to *quarters* was as follows:—

	Cases	Deaths
1st Quarter ...	14	5
2nd " ...	8	6
3rd " ...	162	28
4th " ...	43	13

It will be noted that the great bulk of cases and deaths occurred in the third quarter and during the months of August and September—a characteristic feature of epidemic enteritis. It has long been known that the temperature curve and the mortality curve from epidemic diarrhoea follow each other closely and it has been shewn that the wave of mortality in the larger cities begins to rise only when the 4-foot earth thermometer reaches a mean of 56°F. Thereafter the two curves follow each other closely, the highest mortality occurs in the third quarter, but the fall is usually prolonged far into the fourth. These features are well marked in the above figures and an examination of the appropriate tables in the meteorological section (*q.v.*) has yielded interesting confirmation of the generalisation referred to. The climatic conditions which most favour epidemics of infantile diarrhoea are prolonged hot and dry weather which favour the development of flies in large numbers and the spread of dust. It will be noted from the figures which follow that the latter circumstance is not an essential condition for it will be recalled that August 1942 was an exceptionally wet month. In considering this matter it was decided to examine the relevant figures for a number of years (ten was selected as a suitable number). They are set out as follows:—

MEAN TEMPERATURES.

Year	July	Aug.	Sept.
1933	63.7	62.6	60.1
1934	60.0	54.5	55.0
1935	60.0	58.5	55.0
1936	57.0	62.0	53.0
1937	61.0	61.0	55.0
1938	58.2	60.1	57.0
1939	59.3	62.0	58.1
1940	59.5	55.0	57.5
1941	57.5	61.0	58.5
1942	60.0	62.6	56.4
Average Mean Temp.	59.6	59.9	56.5

It will be noted that August was very markedly above the average so far as mean temperature is concerned. July and September were only slightly so.

MONTHLY RAINFALL (in inches).

	July	Aug.	Sept.
1933	2.00	1.64	1.58
1934	2.20	3.31	5.98
1935	0.50	2.68	6.80
1936	5.67	0.58	2.88
1937	3.21	1.68	3.01
1938	3.97	1.85	2.17
1939	4.20	1.58	1.65
1940	2.39	0.22	1.19
1941	2.33	2.06	1.34
1942	2.25	4.10	1.86
Average Rainfall ...	2.87	1.97	2.84

The rainfall during August was by far the heaviest in the series and was greatly in excess of the average, as will be seen. This however did not have the effect (usually associated with wet weather) of effecting a reduction in the incidence and mortality from diarrhoea and it would seem that *temperature* is a more potent factor. It will be noted that there was a high average temperature both in July and August and it is likely that the rise in ground temperature was maintained well into September which was a bright sunny month. This factor of high ground temperature maintained over a relatively long period would certainly favour the development of flies in a marked degree. It will be recalled too that, in addition to its heavy rainfall the month of August was characterised by periods of heavy, sultry weather disposed to the souring of milk. The role of the fly is undoubtedly in the transfer of specific infection (largely faecal in character) to food and more especially to milk. Apart from this specific contamination milk itself plays an important part since the rapid multiplication of the bacteria normal to it, which occurs in warm weather, has a definite effect in bringing about enteritis in young children an effect greatly enhanced, it is to be feared, by the unhygienic methods under which most of our milk supply is handled. From a consideration of these circumstances we realise at once the peril in which a bottle-fed baby is placed in comparison with his more fortunate breast-fed brother. Discussing the various factors concerned with infantile diarrhoea, SHELDON, in his book, *Diseases of Infancy and Childhood*, alludes to the very marked reduction which has taken place in Great Britain (it remains lamentably high in urban areas in this country) and discusses the various factors which have brought about this reduction. First on his list he places *encouragement of breast feeding*, next the improved hygienic methods in the collection and distribution of milk, the growing custom of sterilising fresh milk by boiling or pasteurising and the increased use of dried milk. He refers to the replacement of horse traffic by motor transport which has had the incidental effect of diminishing dust and flies. JAMESON and PARKISON (*Synopsis of Hygiene*) also stress the factor of feeding and refer to the fact that diarrhoea is more prevalent in bottle-fed than among breast-fed children and note that it is more widespread in towns where scavenging arrangements are poor, where yards are badly paved and where much contaminated dust is present ready to infect any milk or food on which it is blown. Flies, they say, are certainly a common medium of infection.

The causation of epidemic diarrhoea has nowhere been better summarized than by BIGGER (*Handbook of Hygiene*). His views will bear repetition :—

Epidemic enteritis is rare in breast-fed infants even when in the same community artificially fed infants are being heavily attacked. Mothers' milk is the most suitable and most easily digested food for the infant : it is supplied fresh and free from bacteria ; it requires the minimum of intelligence, instruction and money. It is possible to rear an infant successfully by artificial feeding, but this requires money to purchase the best and cleanest milk or other food, constant care and intelligence for its preparation and suitable facilities for its protection and storage. In the absence of these, the food will probably be heavily contaminated by bacteria and disease will occur.

In the following table are shewn the numbers of cases and deaths from diarrhoea which have occurred in the City since 1907, the year in which the disease was first made notifiable here. The *morbidity* rate is based on the number of cases notified in proportion to the population, the *mortality* rate on the number of deaths per 1,000 of the population while the *case fatality* rate represents the deaths registered per 100 cases notified.

Table 18.—Epidemic Diarrhoea. Return of Cases notified and Deaths registered, together with the Mortality, Morbidity and Case-fatality Rates arising therefrom.

Year	No. of Cases	Rate per 1000 Population (Morbidity)	DEATHS		
			Number Recorded	Mortality Rate	Case Fatality Rate*
1907	413	5.42	48	0.63	11.1
1908	524	6.85	79	1.03	15.0
1909	514	6.72	54	0.71	10.3
1910	159	2.07	34	0.44	21.3
1911	352	4.56	78	1.01	22.1
1912	71	0.92	18	0.23	25.3
1913	320	4.13	114	1.48	35.6
1914	188	2.43	67	0.86	35.6
1915	177	2.29	49	0.63	27.6
1916	139	1.79	35	0.45	25.1
1917	83	1.07	34	0.43	40.9
1918	121	1.55	40	0.51	33.0
1919	85	1.09	40	0.51	47.0
1920	54	0.69	22	0.28	40.7
1921	105	1.35	1	0.01	0.94
1922	19	0.24	—	—	—
1923	35	0.44	24	0.30	68.5
1924	30	0.38	10	0.12	33.3
1925	142	1.81	45	0.58	31.6
1926	108	1.37	53	0.67	49.1
1927	76	0.96	24	0.30	31.5
1928	79	1.00	28	0.35	35.4
1929	78	0.98	25	0.31	32.0
1930	59	0.74	37	0.46	62.7
1931	85	1.06	34	0.42	40.0
1932	178	2.22	46	0.57	27.8
1933	189	2.35	45	0.56	23.8
1934	80	0.99	36	0.44	45.0
1935	178	2.21	56	0.69	31.4
1936	261	3.23	41	0.50	15.7
1937	246	3.04	52	0.64	21.1
1938	142	1.76	33	0.41	23.2
1939	197	2.44	39	0.48	19.8
1940	286	3.54	52	0.64	18.4
1941	218	2.85†	36	0.46†	16.5
1942	227	2.95	52	0.68	22.9

*It is obvious that the *fatality rates* in this table must be read with extreme caution. The fluctuation from year to year is so extreme that it is apparent that notification must have been very defective in the years with abnormally high rates. It is obvious, nevertheless, that this is a most fatal disease of early childhood and the figures lend point to the remarks which have been made above in regard to the prime contributory cause.

† Rates from this year are based on Register of Population 1941.

It is evident from the information afforded by this table that diarrhoea constitutes one of our major problems in epidemic disease and we cannot escape from the conclusion that there still is a great deal of leeway to be made up in improving the sanitary conditions over large areas of the city. While we are not in a position to adduce definite figures as to the relative incidence per head in various localities we have sufficient general information to say that it has been heaviest in the poorer, overcrowded localities and this is in keeping with the facts in regard to the epidemiology of the disease. One lesson which must be pressed home in this regard is the absolute necessity for proceeding as rapidly as possible with the clearance of these unhealthy areas and the provision of healthy housing as soon as ever circumstances permit. This in itself will not be sufficient. It will be necessary also to take steps to dispel the ignorance which prevails in regard to the rules of elementary hygiene. It is not much use in moving large masses of people from one locality to another unless they carry with them some knowledge of the means of preventing infection and of attaining to a higher standard of hygiene in their new homes. In the absence of such knowledge there will be a rapid deterioration in the sanitary status of the new houses. So far as the information of our figures goes it is apparent that great as the importance of breast-feeding is among the better-off classes it is imperative so far as the poor are concerned if we are to make any headway against the scourge of infantile diarrhoea. But here we are faced with another problem. A great many of these mothers are simply unable to carry-on with breast-feeding through lack of sufficient food and consequent under-nourishment and must of necessity resort to bottle-feeding. The provision of extra nourishment for such cases would go a long way towards reducing the incidence of diarrhoea and is a more logical procedure than to supply artificial foods as a remedy. To provide an expectant mother with a supply of milk up to the birth of her baby and then to stop it is an entirely irrational procedure leading inevitably to the adoption of artificial feeding with its inherent danger to the infant.

TYPHOID FEVER.

No case of this disease occurred during the year. This is the second occasion on which it has been possible to report the city clear for a period of a year (the former one was in 1930). With the exception of 1942, when a localised minor outbreak occurred, the average incidence of typhoid has been very low for the past fourteen years. The figures for incidence and fatality are set-out on table 19 and the general trend of the disease is represented diagrammatically on Fig. IV.

FIG. IV.—ENTERIC FEVER. INCIDENCE (PER 1,000 POPULATION) FROM 1881 TO PRESENT.

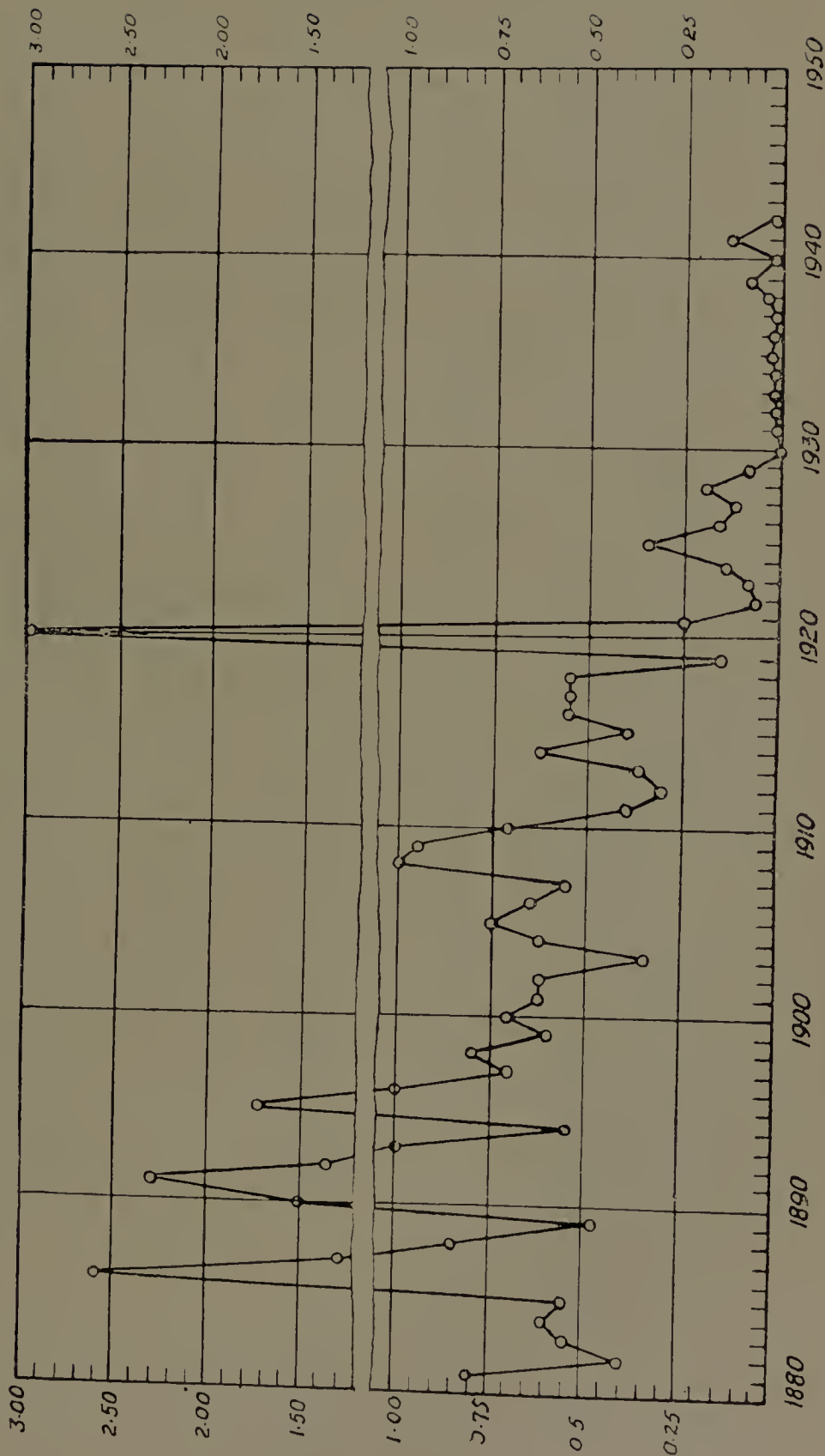


Table 19.—Incidence and Case Fatality of Enteric Fever in Cork City from 1881.

Year	Cases	Incidence per 1,000	Deaths	Fatality Rate
1881	66	0.82	4	6.5
1882	37	0.46	4	10.8
1883	45	0.56	11	24.4
1884	48	0.61	13	27.0
1885	43	0.55	9	20.9
1886	180	2.57	42	23.3
1887	100	1.30	20	20.0
1888	66	0.86	9	13.6
1889	37	0.48	9	24.3
1890	113	1.50	12	10.6
1891	165	2.33	17	10.3
1892	104	1.37	17	18.3
1893	78	1.03	14	17.9
1894	43	0.57	13	30.2
1895	132	1.74	16	12.1
1896	94	1.00	24	25.5
1897	51	0.70	9	17.6
1898	62	0.81	13	20.9
1899	47	0.62	8	17.0
1900	50	0.70	5	10.0
1901	51	0.67	5	9.8
1902	49	0.64	5	10.2
1903	27	0.35	5	18.5
1904	50	0.64	8	16.0
1905	58	0.76	8	13.8
1906	48	0.66	5	10.4
1907	44	0.57	4	9.1
1908	88	1.02	16	18.2
1909	74	0.95	15	20.2
1910	54	0.70	13	24.0
1911	32	0.41	5	15.6
1912	26	0.33	6	23.0
1913	29	0.38	6	20.7
1914	50	0.64	4	8.0
1915	32	0.41	5	15.6
1916	42	0.54	6	14.3
1917	43	0.55	3	6.9
1918	42	0.54	8	19.0
1919	12	0.15	1	8.3
1920	244	3.13	13	5.3
1921	21	0.26	4	19.0
1922	6	0.07	2	33.3
1923	7	0.09	1	14.2
1924	11	0.14	2	18.1
1925	27	0.34	5	18.5
1926	11	0.14	2	18.2
1927	10	0.12	2	20.0
1928	17	0.21	2	11.7
1929	6	0.08	1	16.6
1930	0	—	—	—
1931	1 (a)	0.01	1	100.0
1932	1 (a)	0.01	1	100.0
1933	2 (a)	0.02	—	(b)
1934	1	0.01	—	—
1935	3	0.03	—	—
1936	2	0.02	—	—
1937	1	0.01	—	—
1938	3 (a)	0.03	1	33.3
1939	7	0.08	—	—
1940	2	0.02	—	—
1941	12	0.15	—	—
1942	—	—	—	—

(a) Infection in all these cases was incurred outside the City.

(b) Two deaths were recorded in Cork Mental Hospital (Co. Area) of inmates who formerly resided in the City.

SCARLET FEVER.

50 cases were reported. There was no death.

TYPHUS.

For the thirteenth year in succession there has been no case. As a matter of interest the table relative to this disease, first published in 1935, is reproduced in this report.

Table 20.—Incidence and Case Fatality of Typhus Fever in Cork City from 1881.

Year	Cases	Incidence per 1,000	Deaths	Fatality Rate
1881	1406	17.42	88	6.2
1882	683	8.57	54	7.9
1883	844	10.66	46	5.4
1884	456	5.65	37	8.1
1885	159	2.03	21	3.2
1886	83	1.06	17	18.0
1887	67	0.86	12	17.9
1888	72	0.93	21	27.7
1889	48	0.63	5	10.4
1890	54	0.71	7	12.9
1891	24	0.30	5	20.8
1892	162	2.28	23	14.1
1893	92	1.20	7	7.6
1894	25	0.33	2	8.0
1895	29	0.38	8	31.0
1896	22	0.29	7	31.8
1897	30	0.39	3	10.0
1898	61	0.80	11	18.0
1899	9	0.10	6	66.6
1900	28	0.36	4	14.3
1901	13	0.17	2	15.38
1902	6	0.07	—	—
1903	7	0.09	—	—
1904	11	0.14	1	9.1
1905	9	0.11	2	22.2
1906	6	0.07	4	66.6
1907	10	0.13	6	60.0
1908	23	0.30	6	26.1
1909	18	0.24	5	27.7
1910	8	0.10	3	37.5
1911	10	0.13	—	—
1912	1	0.01	—	—
1913	5	0.06	2	40.0
1914	1	0.01	1	100.0
1915	—	—	—	—
1916	1	0.01	1	100.0
1917	3	0.04	1	33.3
1918	1	0.01	1	100.0
1919	15	0.19	3	20.0
1920	2	0.03	—	—
1921	1	0.01	1	100.0
1922	—	—	—	—
1923	1	0.01	1	100.0
1924	1	0.01	—	—
1925	—	—	—	—
1926	3	0.04	1	33.3
1927	4	0.05	—	—
1928	1	0.01	—	—
1929	1	0.01	1	100.0

There has been no case since 1929.

VACCINATION.

The position in which this area was placed by the outbreak of small-pox in Glasgow during the year is fully discussed in the section dealing with the Port Sanitary Services. In this connection the position in regard to vaccination was reviewed the relevant figures for each year placed in conjunction with the number of births and, as a result the subjoined table was obtained. The figures for the other municipal boroughs are also stated. The figures were obtained from the Yearly Summaries of the Registrar General.

	CORK			DUBLIN			LIMERICK			WATER-FORD		
Year	Births	Vaccinations	Proportion	Births	Vaccinations	Proportion	Births	Vaccinations	Proportion	Births	Vaccinations	Proportion
1936	1,921	1,833	95%	11,582	3,903	34%	975	622	64%	661	54	8%
1937	1,706	1,898	110%	11,652	3,199	27%	1,006	672	67%	696	71	10%
1938	1,761	1,532	87%	11,534	4,076	35%	1,030	579	55%	626	27	4%
1939	1,632	1,591	97.5%	11,384	3,051	27%	1,073	596	55%	614	16	3%
1940	1,670	1,050	63%	11,064	2,700	24%	984	601	61%	677	43	6%
1941	1,753	1,138	65%	11,305	3,412	30%	1,007	558	55%	613	30	5%
1942	1,706	1,065	62%	12,528	3,517	28%	1,115	763	68%	807	47	6%

The figures do not pretend to complete accuracy (this will be apparent from the statement for Cork for 1937 when more were vaccinated than were actually born). They do not represent the number of children born each year who were vaccinated *that* year. Some of the children would have been more than a year old when vaccinated, some even older but still the vast majority (so far as Cork, at any rate, is concerned) are vaccinated within the specified statutory period. Taken over a number of years they represent the *trend* and form a rough and ready guide as to the vaccination status of the communities concerned. The marked decline in this area since 1940 has been due to the prevalence of scabies which has become widespread and constitutes a major public health problem in this, as well as other countries at the present time. (To meet this problem a special scabies clinic has been established with the whole-time services of two temporary nurses). It is apparent from these figures that we are far from being in an invulnerable position should small-pox be introduced. This unsatisfactory state of affairs is very largely due to the loopholes afforded by the vaccination laws as they stand and to the temporising manner in which our efforts to enforce them have been dealt with. An outbreak of small-pox in this country at the present time might have disastrous consequences; it is high time, therefore, that the laws should be completely reviewed and that one new act should replace the older ones, framed in such a manner as to make its provisions quite unequivocal. It is notorious that there are large areas in which the population is completely unvaccinated, these areas constitute a danger of the first magnitude to the rest of the country and until such time as they have been effectively dealt with we must rest very uneasy as to our protection against small-pox.

OTHER INFECTIOUS DISEASES

Notifications in regard to other infectious diseases during the year were as follows :—

Erysipelas ...	...	...	...	38
Acute Primary Pneumonia	...	...	...	32
Acute Influenzal Pneumonia	...	...	...	2
Varicella ...	...	...	...	65
Ophthalmia Neonatorum	...	...	...	3
Cerebro Spinal Fever	...	...	...	2
Whooping Cough ...	...	...	...	95

Particulars of Articles Disinfected during the year.

	Bed Ticks	Mat- tresses	Articles of Bedding	Articles of Wearing Apparel	Miscel- laneous Articles	Total No. of Articles
January ...	8	34	253	31	20	346
February ...	3	32	213	6	33	287
March ...	4	39	321	56	20	440
April ...	7	31	176	28	20	262
May ...	4	33	192	25	22	276
June ...	13	62	374	74	49	572
July ...	6	44	242	19	26	337
August ...	9	53	267	18	27	374
September ...	12	50	310	13	28	413
October ...	19	66	459	39	29	612
November ...	12	58	444	28	40	582
December ...	10	41	369	154	27	601
	107	543	3,620	491	341	5,102

Table 21.—Yearly Summary of Infectious Diseases from 1879.

Year	Small Pox	Typhus	Typhoid or Enteric Fever	Simple Continued Fever	Scarlatina	Puerperal Fever	Membranous Croup	Diphtheria	Erysipelas	Measles	Diarrhoea	Chicken Pox	Cerebro-Spinal Meningitis	Poliomyelitis	Encephalitis Lethargica	Pneumonia	
																Acute Primary	Acute Influenza
1879	—	337	91	335	386	—	—	2	30	269	107	—	—	—	—	—	—
1880	—	756	117	420	616	—	—	9	37	282	48	—	—	—	—	—	—
1881	—	1406	66	364	103	—	—	—	31	240	5	—	—	—	—	—	—
1882	—	683	37	239	25	—	—	3	11	146	3	—	—	—	—	—	—
1883	—	844	45	164	105	—	—	6	—	109	1	—	—	—	—	—	—
1884	—	456	48	221	158	—	—	2	14	106	3	—	—	—	—	—	—
1885	1	159	43	94	143	—	—	2	17	35	—	—	—	—	—	—	—
1886	—	83	180	70	86	—	—	1	14	24	—	—	—	—	—	—	—
1887	—	67	100	46	17	—	—	4	25	182	1	—	—	—	—	—	—
1888	—	72	66	40	55	—	—	7	25	232	—	—	—	—	—	—	—
1889	—	48	37	24	90	—	—	9	12	—	—	—	—	—	—	—	—
1890	—	54	113	36	128	5	3	20	27	3	2	—	—	—	—	—	—
1891	1	24	165	46	64	3	3	37	27	2	—	—	—	—	—	—	—
1892	1	162	104	53	19	—	3	11	45	74	1	—	—	—	—	—	—
1893	—	92	78	26	91	3	—	18	70	4	2	—	—	—	—	—	—
1894	—	25	43	29	301	5	6	14	65	11	2	—	—	—	—	—	—
1895	—	29	132	23	53	3	1	6	45	2	—	—	—	—	—	—	—
1896	—	22	94	29	69	6	—	7	54	3	2	—	—	—	—	—	—
1897	—	30	51	23	34	7	4	21	35	9	—	—	—	—	—	—	—
1898	—	61	62	30	30	6	7	18	20	2	—	—	—	—	—	—	—
1899	—	9	47	14	22	2	10	18	60	23	—	—	—	—	—	—	—
1900	—	28	50	27	401	2	2	23	36	—	—	—	8	—	—	—	—
1901	—	13	51	29	288	3	12	26	38	—	—	—	8	—	—	—	—
1902	—	6	49	16	119	4	1	8	49	8	—	7	3	—	—	—	—
1903	3	7	27	16	51	2	6	17	58	5	—	49	1	—	—	—	—
1904	1	11	50	33	29	4	3	29	43	2	—	39	4	—	—	—	—
1905	1	9	58	47	35	7	8	18	50	7	—	33	4	—	—	—	—
1906	—	6	48	31	23	10	1	37	48	8	—	49	3	—	—	—	—
1907	—	10	44	44	50	6	4	37	42	4	413	63	8	—	—	—	—
1908	—	23	88	55	114	4	6	40	26	379	524	14	1	—	—	—	—
1909	—	18	74	42	119	10	4	66	25	44	514	21	—	—	—	—	—
1910	—	8	54	24	38	4	6	51	26	14	159	16	—	—	—	—	—
1911	—	10	32	22	39	4	13	70	31	433	352	1	1	—	—	—	—
1912	—	1	26	17	93	6	5	52	29	53	71	7	—	—	—	—	—
1913	—	5	29	13	81	4	10	24	28	254	320	2	—	—	—	—	—
1914	—	1	50	12	230	11	15	54	38	161	188	8	—	—	—	—	—
1915	—	—	32	4	245	2	8	68	44	160	177	10	6	—	—	—	—
1916	—	1	42	9	112	8	11	43	41	86	139	13	6	—	—	—	—
1917	—	3	43	6	46	1	9	26	24	28	83	8	3	—	—	—	—
1918	—	1	42	10	21	2	18	34	16	750	121	19	4	—	—	—	—
1919	—	15	12	3	16	4	21	262	18	3	85	26	2	—	—	—	37
1920	—	2	244	8	70	6	3	428	18	9	54	30	—	—	—	—	—
1921	—	—	21	1	14	4	8	541	17	2	105	28	—	—	—	—	—
1922	—	—	6	—	29	1	5	379	14	324	19	29	—	—	—	—	—
1923	—	1	7	1	44	1	4	440	45	10	35	30	—	—	—	—	—
1924	—	1	12	—	41	3	3	217	30	5	30	54	—	—	—	—	—
1925	—	—	27	—	81	4	9	265	35	94	142	117	—	—	1	—	5
1926	—	4	11	2	278	4	11	469	34	534	108	59	—	—	1	—	—
1927	—	4	10	1	205	14	11	344	25	7	76	76	1	1	3	—	—
1928	—	1	17	—	208	7	15	385	24	6	79	64	1	—	—	—	12
1929	—	1	6	—	216	6	4	369	24	226	78	80	—	—	2	—	7
1930	—	—	—	1	238	6	5	588	38	241	59	72	—	—	1	—	3
1931	—	—	1	—	98	1	1	288	19	3	85	71	1	—	1	49	41
1932	—	—	1	—	80	9	1	85	13	242	178	99	—	—	2	28	7
1933	—	—	2	—	181	9	—	109	24	49	189	79	—	—	1	3	2
1934	—	—	1	—	118	10	—	109	28	126	80	158	—	—	—	2	1
1935	—	—	3	—	52	11	1	56	24	300	178	53	—	—	—	5	2
1936	—	—	2	—	437	12	1	24	18	233	261	69	3	—	—	14	14
1937	—	—	1	—	454	6	—	79	26	88	246	218	5	1	—	21	45
1938	—	—	3	—	228	1	—	54	18	12	142	83	14	—	—	19	3
1939	—	—	7	—	158	4	—	41	31	3	197	28	1	—	—	14	1
1940	—	—	2	—	143	1	—	52	23	1613	286	52	2	1	1	27	1
1941	—	—	12	—	42	1	—	62	29	94	218	254	2	—	—	21	1
1942	—	—	—	—	50	—	—	372	38	1	227	65	2	—	—	32	2

NOTE.—Whooping Cough (95 cases) and Puerperal Pyrexia (4 Cases) became notifiable for the first time in 1942 in accordance with the provisions of the Public Health (Infectious Diseases) Regulations, 1941.

Section IV.—Tuberculosis

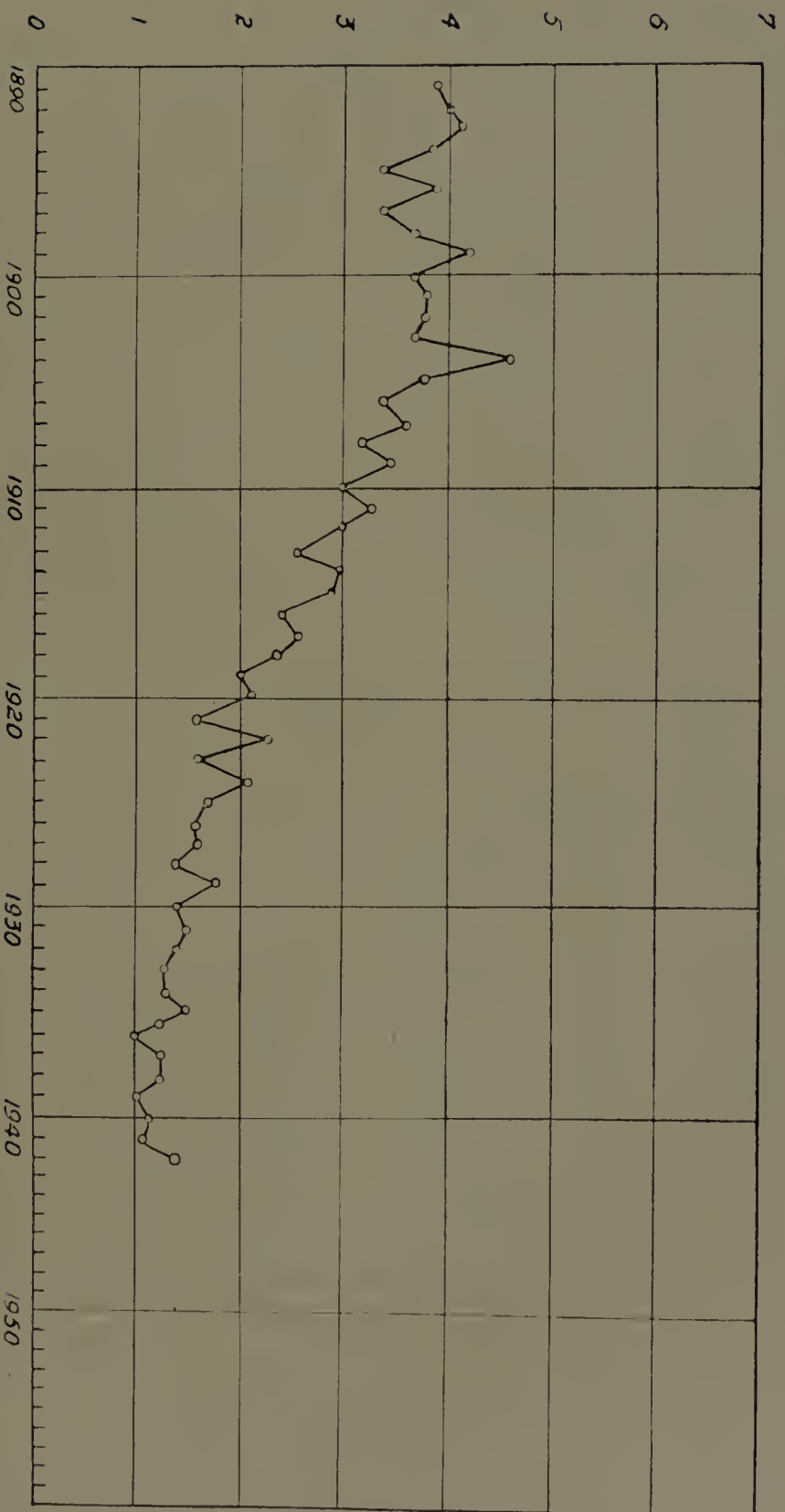
The death rate from pulmonary tuberculosis for the year was 1.38 per 1,000 of the population. The following table shows the death-rates each year from 1891 to the present time.

Table 22.—Deaths and Death Rates Pulmonary Tuberculosis.

Year	No. of Deaths	Rate per 1,000 pop.	Year	No. of Deaths	Rate per 1,000 pop.
1891	295	3.93	1917	202	2.63
1892	303	4.04	1918	187	2.43
1893	314	4.18	1919	156	2.04
1894	296	3.94	1920	159	2.07
1895	261	3.48	1921	125	1.64
1896	299	3.98	1922	176	2.30
1897	260	3.46	1923	130	1.64
1898	283	3.77	1924	164	2.09
1899	320	4.26	1925	134	1.71
1900	281	3.74	1926	126	1.60
1901	289	3.80	1927	129	1.60
1902	287	3.79	1928	109	1.39
1903	279	3.67	1929	141	1.79
1904	352	4.63	1930	114	1.45
1905	294	3.86	1931	124	1.56
1906	261	3.43	1932	111	1.40
1907	278	3.65	1933	106	1.35
1908	245	3.22	1934	104	1.34
1909	264	3.47	1935	115	1.46
1910	233	3.06	1936	85	1.06
1911	252	3.29	1937	96	1.20
1912	231	3.01	1938	99	1.21
1913	202	2.62	1939	86	1.06
1914	231	3.01	1940	96	1.17
1915	211	2.88	1941	86	1.12
1916	189	2.46	1942	106	1.38

The figures indicate a serious rise in mortality for the past year, being equivalent to an increase of approximately 23.2 per cent on those for 1941. This increase has apparently been experienced all over the country and has led to a Departmental enquiry the full results of which are not yet forthcoming. It will be noted from the table appertaining to non-pulmonary tuberculosis which follows that there was a slight reduction in such deaths while the combined rate (pulmonary and non-pulmonary) shows an increase of 14.2 per cent over the combined figure for the previous year. Thus a very marked check has been imposed upon the downward trend in deaths from tuberculous conditions. This is, of course, what one normally expects under war conditions although, as was shewn in last year's report, it had not made its appearance in this country up to the end of that period and, indeed, that it did not

FIG. V.—PULMONARY TUBERCULOSIS. DEATH RATES PER 1,000 POPULATION FROM 1891 TO PRESENT.



manifest itself at all in this country during the last war, at least not in any degree comparable to that of the belligerent powers. It was pointed out too that attention had been focussed on this question in an article by STOCKS in which he shewed that, so far as England and Wales were concerned there had been an increase of 6% in mortality in the first year of the present war and 10% in the second. This refers to pulmonary tuberculosis. So far as non-respiratory tuberculosis is concerned the relative increases amounted to 2.4 per cent and 17.6 per cent respectively. It is of interest, therefore, to note from the latest statistical evidence adduced by the same author (*The Lancet*—May 29th, 1943) that there has been a welcome reversal of the previous figures, deaths from pulmonary tuberculosis being down by 11 per cent, from tuberculosis meningitis by 16 per cent and from other forms by 4 per cent. The total deaths from all forms of tuberculosis were 11 per cent fewer than in 1941. Dr. Stocks, however, points out that had the previous decline been maintained there would have been about 4,000 less deaths in 1942 than was actually the case so that there is much leeway to be made up. It is to be hoped that the increase noted here this year may be an isolated manifestation and that the figures for 1943 may shew an appreciable reduction. Meanwhile as they stand they call for very serious consideration both in regard to their interpretation and to the measures to be taken to put a check on any tendency towards increased mortality arising from war conditions. The actual figures for non-pulmonary tuberculosis and for all forms is shewn in the two following tables.

Table 23.—Deaths and Death Rates from *non-pulmonary* Tuberculosis.

Year	No. of Deaths	Rate per 1,000 pop.	Year	No. of Deaths	Rate per 1,000 pop.
1906	81	1.06	1925	31	0.39
1907	84	1.10	1926	46	0.58
1908	93	1.08	1927	35	0.44
1909	78	1.02	1928	29	0.36
1910	75	0.97	1929	17	0.21
1911	73	0.95	1930	25	0.31
1912	71	0.92	1931	46	0.57
1913	79	1.02	1932	45	0.56
1914	79	1.02	1933	19	0.24
1915	72	0.93	1934	21	0.25
1916	69	0.89	1935	29	0.36
1917	78	1.00	1936	20	0.25
1918	75	0.96	1937	24	0.29
1918	58	0.74	1938	13	0.16
1920	46	0.59	1939	14	0.17
1921	34	0.43	1940	29	0.35
1922	39	0.50	1941	20	0.26
1923	32	0.40	1942	18	0.24
1924	32	0.40			

Table 24.— Combined Deaths and Death rates from Pulmonary and Non-pulmonary Tuberculosis.

Year	Pulmonary Deaths	Non-pulmonary Deaths	Total	Rate per 1,000 pop.
1906	261	81	342	4.49
1907	278	84	362	4.74
1908	245	93	338	4.42
1909	264	78	342	4.47
1910	233	75	308	4.01
1911	252	73	325	4.23
1912	231	71	302	3.92
1913	202	79	381	3.64
1914	231	79	310	4.02
1915	211	72	383	3.66
1916	189	69	258	3.33
1917	202	78	280	3.61
1918	187	75	262	3.37
1919	156	58	214	2.75
1920	159	46	205	2.64
1921	125	34	159	2.03
1922	176	39	215	2.75
1923	130	32	162	2.05
1924	164	32	196	2.50
1925	134	31	165	2.10
1926	126	46	172	2.18
1927	129	35	164	2.08
1928	108	29	138	1.74
1929	141	17	158	2.00
1930	117	25	142	1.78
1931	124	46	170	2.13
1932	111	45	156	1.95
1933	106	19	125	1.56
1934	107	21	128	1.59
1935	115	29	144	1.78
1936	85	20	105	1.29
1937	96	24	120	1.48
1938	99	13	112	1.38
1939	86	14	100	1.23
1940	96	29	125	1.54
1941	86	20	106	1.38
1942	104	18	121	1.57

Table 25.—Cork City. Deaths from Pulmonary Tuberculosis.

Year	Sex	All Ages	Under 1 year	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65 and over
1923	M	70	—	2	4	16	12	17	14	4	1
	F	66	—	2	4	13	19	14	8	4	2
1924	M	80	—	2	1	13	16	20	16	9	3
	F	73	—	—	2	17	23	16	7	5	3
1925	M	59	1	3	2	10	17	15	8	3	—
	F	77	1	2	5	23	20	13	6	4	3
1926	M	65	1	2	4	14	14	16	7	5	2
	F	60	—	—	5	11	19	12	9	2	2
1927	M	62	1	1	1	1	15	22	10	4	1
	F	72	—	4	3	16	18	16	10	4	1
1928	M	49	—	1	1	11	10	11	10	4	1
	F	67	—	1	4	15	21	12	7	7	—
1929	M	65	—	2	—	16	14	16	11	2	4
	F	80	—	—	2	24	24	17	7	2	4
1930	M	58	—	—	1	16	16	14	9	2	—
	F	46	—	1	2	9	14	10	5	3	2
1931	M	62	—	1	—	12	16	11	13	8	1
	F	61	—	1	4	15	17	14	6	3	1
1932	M	58	—	—	1	7	22	15	8	4	1
	F	54	—	1	3	14	21	5	7	3	—
1933	M	52	—	—	—	8	17	14	11	1	1
	F	53	—	—	—	18	12	10	9	3	1
1934	M	53	—	—	2	6	13	16	12	3	1
	F	50	—	—	1	14	12	16	3	3	1
1935	M	58	1	1	—	10	9	20	13	4	—
	F	54	—	—	2	11	18	9	11	3	—
1936	M	38	—	—	2	7	11	15	8	5	—
	F	34	—	1	—	6	8	7	5	6	1
1937	M	56	—	—	—	9	10	13	13	8	2
	F	40	—	—	2	10	9	10	4	5	—
1938	M	61	—	—	—	12	12	13	17	4	3
	F	38	—	—	—	4	15	10	7	2	—
1939	M	53	—	—	1	10	6	13	16	6	1
	F	33	—	—	2	11	4	6	6	4	—
1940	M	48	—	—	—	12	9	10	9	8	—
	F	48	1	—	—	12	13	14	4	2	2
1941	M	46	—	—	—	8	11	12	9	6	—
	F	42	—	—	—	5	10	14	9	4	—
1942	M	61	—	—	1	9	13	12	15	5	5
	F	45	—	—	1	17	9	7	6	4	—

A similar plan to that adopted last year has been followed for the current year in examining the figures—an examination of the quarterly returns over a number of years together with a graphical representation of the results obtained. These are shewn in table 26 and in Fig. VI.

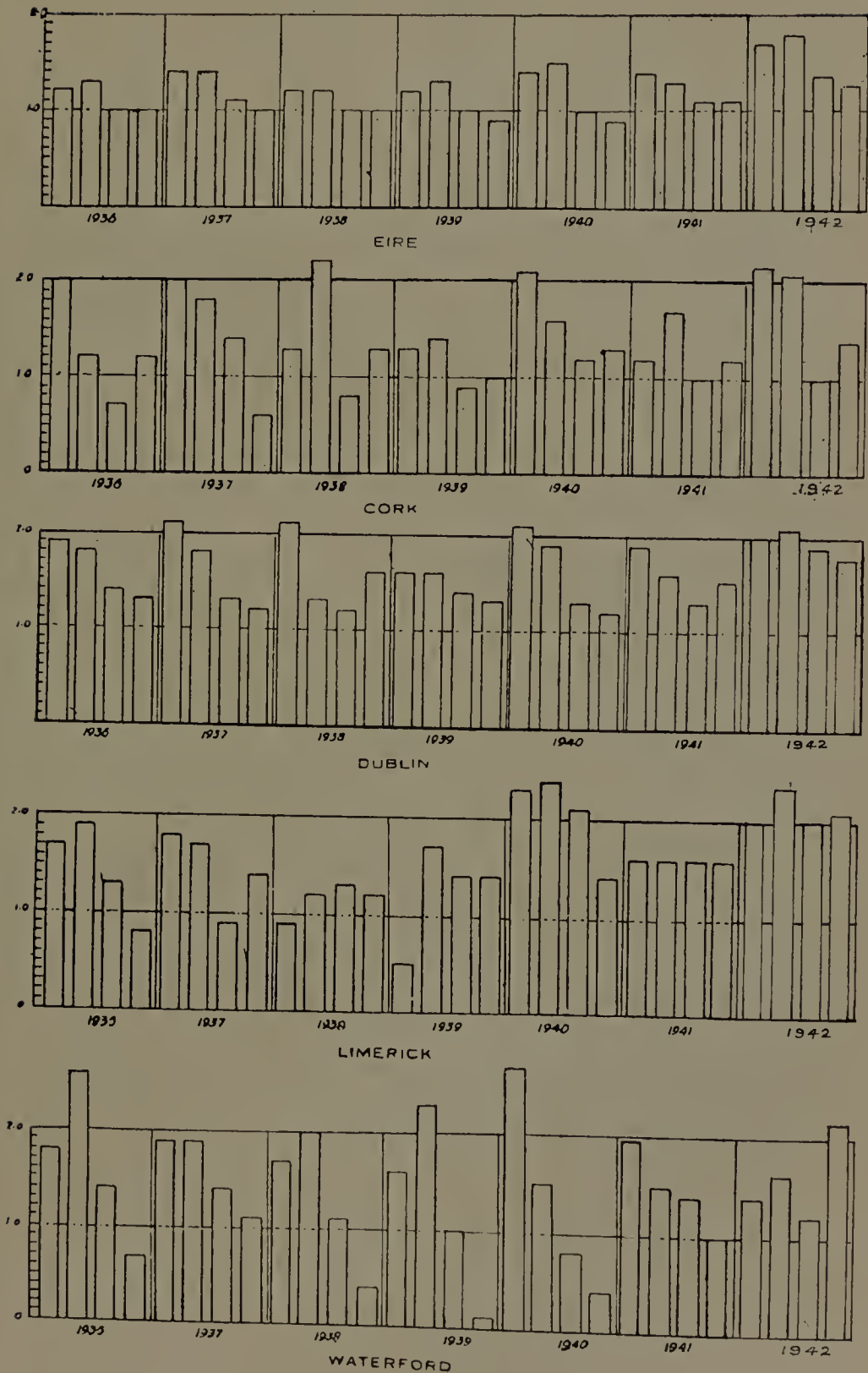
Table 26—TUBERCULOSIS (all forms) Deaths and Death-rates (by quarters) for Éire and the four County Boroughs.

Year	Con- secu- tive Quar- ters	EIRE		CORK		DUBLIN		LIMERICK		WATERFORD	
		Deaths	Rate per 1000	Deaths	Rate per 1000	Deaths	Rate per 1000	Deaths	Rate per 1000	Deaths	Rate per 1000
1936	1	969	1.2	44	2.0	208	1.9	17	1.7	12	1.8
	2	989	1.3	22	1.2	213	1.8	19	1.9	17	2.6
	3	792	1.0	16	0.7	165	1.4	13	1.3	10	1.4
	4	730	1.0	24	1.2	153	1.3	8	0.8	5	0.7
1937	1	1040	1.4	43	2.0	247	2.1	19	1.8	13	1.9
	2	1031	1.4	35	1.8	209	1.8	18	1.7	13	1.9
	3	823	1.1	28	1.4	148	1.3	9	0.9	10	1.4
	4	745	1.0	10	0.6	143	1.2	14	1.4	8	1.1
1938	1	878	1.2	27	1.3	187	1.5	8	0.8	12	1.7
	2	892	1.2	44	2.2	164	1.3	12	1.2	14	2.0
	3	696	1.0	17	0.8	149	1.2	13	1.3	8	1.1
	4	750	1.0	26	1.3	193	1.6	12	1.2	3	0.4
1939	1	894	1.2	26	1.3	191	1.6	5	0.5	11	1.6
	2	944	1.3	30	1.4	198	1.6	17	1.7	16	2.3
	3	770	1.0	20	0.9	163	1.4	14	1.4	7	1.0
	4	693	0.9	20	1.0	164	1.4	14	1.4	1	0.1
1940	1	1000	1.4	42	2.1	254	2.1	23	2.3	19	2.7
	2	1107	1.5	33	1.6	230	1.9	25	2.4	11	1.5
	3	800	1.0	25	1.2	154	1.3	21	2.1	6	0.8
	4	693	0.9	28	1.3	151	1.2	14	1.4	3	0.4
1941	1	1028	1.4	25	1.2	226	1.9	16	1.6	13	1.9
	2	980	1.3	35	1.7	197	1.6	16	1.6	11	1.5
	3	832	1.1	21	1.0	158	1.3	16	1.6	10	1.4
	4	818	1.1	24	1.2	180	1.5	17	1.6	7	1.0
1942	1	1128	1.5	41	2.2	244	2.0	21	2.0	10	1.4
	2	1269	1.7	40	2.1	261	2.1	25	2.4	12	1.7
	3	958	1.3	19	1.0	212	1.8	21	2.0	9	1.2
	4	920	1.2	26	1.4	207	1.7	22	2.1	16	2.2

It will be noted from this table that the increased mortality has been general throughout the country and that in practically all instances the returns for each quarter have been affected.

In considering the problems raised by these figures various factors have to be taken into consideration, such as housing, nutrition, the effect on the various age-groups and on the sexes. The latter may be regarded as a convenient starting-point for it is obvious that important information may be forthcoming if it can be shewn that one age-group or either sex has been affected more than the population as a whole. If it is found that the increases have been evenly distributed over both sexes and all age groups the inferences to be drawn will obviously be

FIG. VI.—TUBERCULOSIS (ALL FORMS) DEATH RATES BY
QUARTERS, 1936—1942.



different to those from figures shewing a marked preponderance for a limited group. First of all a general statement of the position for the past few years may be helpful for reference.

	Pulmonary	Non-Pulmonary	Combined
1937	1.20	0.29	1.48
1938	1.21	0.16	1.38
1939	1.06	0.17	1.23
1940	1.17	0.35	1.54
1941	1.12	0.26	1.38
1942	1.38	0.24	1.58

It is on a comparison of the respective figures that the increases cited above have been based. An increase of 14 per cent is undoubtedly of serious moment and compares unfavourably with the rates of increase noted in Great Britain in 1941. Our first task is to determine on what group or groups this increase has had most effect. An examination of table 25 shows that, taking all ages together there has been appreciable excess among males (61 as compared with 45). In the 15 to 25 group there is a very marked increase of *female* deaths as compared with males (17 to 9). As will be seen later this has an important bearing on the problem. In all the other age-groups the excess of males over females is maintained. Generally speaking the number of male deaths from tuberculosis is in excess of that of females, especially in the case of tuberculosis, and this is believed to be due to greater hazards to which males are exposed in industry. It would be of much interest and importance if one could examine the actual death-rates in each of the age-groups, that is to say compute the rate per thousand represented by the figure, say of 26 in the 15/25 group or the figure 17 for females in this group) and see how they compare with the equivalent figures in the other groups. This, of course, would be a much more accurate method than the one we must perforce fall back upon in the absence of figures relative to the age-sex composition of the population which have no longer been available since the compilation of the Register of Population in 1941. There was a considerable fall in the population of this city (over 4,000) between the years 1936 and 1941 involving the age-groups most susceptible to the effects of tuberculosis. Until a fresh statement of this age-sex constitution is available it is useless to attempt to convert these figures into rates so that they must be taken by and large as they stand. In order to examine the implications of the available evidence a little more closely it is necessary to compare the figures for a number of years. Those for the groups under 15 years and over 65 are so small as to be without statistical significance. They are therefore omitted in subsequent considerations. The first analysis simply comprises a comparison of the various groups without differentiation as regards sex and is as follows :

	15/25	25/35	35/45	45/55	55/65
1937	19	19	23	17	13
1938	16	27	23	24	6
1939	21	10	19	22	10
1940	24	22	24	13	10
1941	13	21	26	18	10
1942	26	22	19	21	9

The most striking feature in this grouping is the increase in deaths in the 15/25 group. This has to be borne in mind. There is also an appreciable reduction in the 35/45 group as compared with the previous year but it will be noted that there was a similar figure in 1939. Undoubtedly the increase in the first column is the most marked feature. A further analysis into sexes gives the following result.

Year	15/25		25/35		35/45		45/55		55/65	
	M	F	M	F	M	F	M	F	M	F
1937	9	10	10	9	13	10	13	4	8	5
1938	12	4	12	5	13	10	17	7	4	2
1939	10	11	6	4	13	6	16	6	6	4
1940	12	12	9	13	10	14	9	4	8	2
1941	8	5	11	10	12	14	9	9	6	4
1942	9	17	13	9	12	7	15	6	5	4

This table brings to light the fact that the increase in the 15/25 group is made up almost entirely of *increased female* deaths, whereas the reduction already referred to in the 35/45 groups was due entirely to *reduced* deaths among the same sex. The fluctuations from year to year in the different groups and among the two sexes are indeed very confusing and discourage speculation as to the causes. An examination of Table 25, brings out this feature for a considerable number of years. There is a marked tendency to fluctuate but the general trend is downward, two circumstances which discourage dogmatism in regard to the figures for 1942. It is true that the figure (17) in the 15/25 group for females is larger than in any of the preceding five years but it has been equalled or exceeded on many occasions in the past. We are, however, dealing with a disease which has exhibited a pronounced downward tendency and one can scarcely go back more than a few years for comparable figures. It is safe to say that a figure of 17 deaths in 1942 is a much worse showing than a similar number in (say) 1924. An examination of the particular classes into which these 17 female deaths can be placed has not been very helpful. According to the designations of the certifying physicians they were as follows :—

Labourer's Daughter	...	...	...	8
Factory Hand	...	...	...	4
Miller's Daughter	...	...	...	1
School Girl ...	...	...	...	1
Clerk's Daughter	...	...	...	1
Housewife ...	...	...	...	1
Caretaker's Daughter	...	...	...	1

In the absence of information as to the number of persons in each of the occupations specified the figures are more or less meaningless. Furthermore, what is meant by the term 'labourer's daughter'? To be of any real use each of these deaths should be investigated with a view to ascertaining the economic status of the family concerned and the number at risk in each group, a task beyond our capabilities at present. In this connection it is well to bear in mind that in this locality the great bulk of the well-to-do live outside the city boundaries and, accordingly, that the majority of the citizens belong to the artisan and labouring classes. It is a matter of considerable importance in comparing the incidence of the disease in different areas, to ascertain what proportion of the respective classes come within the scope of enquiry. Tuberculosis is more prevalent among the poor than among the rich and if the proportion of the latter be higher in one community than in the other we would naturally expect a better showing from it. The extensions of the borough boundaries in recent times which have had the effect of embracing the whole of greater Dublin in one administrative unit should have resulted in bringing into the statistical tables a large number of well-to-do persons who previously did not influence them and, so far as tuberculosis is concerned, of producing rates more favourable than other localities in which no such change has occurred. There has been no such extension of the borough boundary in Cork for a very long number of years and the flow of the well-to-do has been definitely outwards into the suburban areas, leaving behind a proportionately larger number of persons more vulnerable to tuberculosis. The effect of such movement must of necessity be borne in mind in considering the statistics of this area in relation to others. The most outstanding fact which has emerged from this enquiry is that the increased deaths has fallen most markedly upon females of 15/25 years age group and it is necessary now to examine the various sociological factors which may have had a bearing on this increase.

Before proceeding to a discussion on the bearing of these factors on the increased mortality from tuberculosis in this country there is one aspect of the whole problem which I consider to need emphasis. I adverted to this specifically in my report for the year 1941 as I consider it of fundamental importance in any consideration of tuberculosis in this country. I refer to the migration of country dwellers into the towns and cities which has been taking place to such a marked degree in recent years. This is bound to have a deleterious effect on our tuberculosis statistics. Briefly restated it involves the known fact that the typical peasant is less resistant to tuberculosis than the typical town dweller by reason of his lack of experience of the disease in sub-infective doses and his consequential lack of resistance once infection has been established, especially if massive infection is involved. I believe this migration to be very largely responsible for the increased incidence of and mortality from tuberculosis in the urban areas as compared with rural districts and for the increased mortality from the disease in this country as a whole in comparison with neighbouring countries which have long been industrialised. The important point is that in the latter the flow from the country to the town has either been stemmed or long become stabilised. The reverse appears to hold in this country

and the result is that large numbers of susceptible country people keep migrating into the towns to further aggravate the already unsatisfactory conditions of overcrowding and to provide continuously fresh material for infection by the tubercle bacillus. This is, in my opinion, the principal reason for the higher tuberculosis rates in this country when compared with England and Wales and similar countries and to overlook this factor in any consideration of the present increase would be a serious error.

Housing.

Since 1934 a total of 1,876 houses have been built by the Corporation, all on healthy sites, involving the transfer of over 10,800 persons from unhealthy overcrowded areas. It is obvious therefore that there has been an improvement in the housing situation. It can be said that there has been no deterioration during the past two or three years as compared with (say) the previous ten years. This is not to say that the housing needs of the city have been met. Such is very far from being the case for there are still very many cases of gross overcrowding known to us calling loudly for remedy. One of the most striking features of modern times is the scarcity of houses on offer to let as compared with the period before the first European war. This indicates that housing needs are still very acute notwithstanding all the building which has been undertaken during the past ten years. On the whole, however, it may be said that the housing situation has improved (certainly up to the outbreak of the present war) and that it is now better than in previous years. Consequently this cannot be said to have been a factor in the current *increase* in the death-rate from tuberculosis. It would, of course, be a mistake to infer from this conclusion that bad housing does no play any part in the production of high death-rates. Any such inference would be an obvious fallacy for it is well-known that conditions of overcrowding and bad housing generally favour the spread of disease in general in a very marked degree. It is apparent therefore that the provision of more and more healthy houses must continue to be an integral part in any programme of sanitary reform which may be embarked on in the future. In this connection, however, it is essential to bear in mind the fact that the provision of good housing *per se* will not ensure an improvement in the general health. This is a lesson which has been painfully learned and to which public attention was first drawn by the late Dr. McGonigle in his celebrated survey on housing conditions and health in Stockton-on-Tees. The main fact emerging from this enquiry is that the death-rate among the community moved into the new area rose to a considerably higher degree than that of the people who remained behind in the so-called unhealthy area. The decisive factors in producing the unfavourable rate in the new area were the increased rents and transport charges and the consequential lowering in the purchasing power of the people so that they were no longer able to buy as much food as formerly. The general inference is that it is no use moving people into new houses if the rent of these houses is beyond the capacity of the occupants to pay without stinting themselves of necessities in the way of food. In other words, that nutrition is more important than environment. The ideal to be aimed at is a sufficiency of nourishment combined with healthy surroundings.

Nutrition.

Enquiries in connection with this aspect of the problem were made as follows: (a) The St. Vincent de Paul Society, to ascertain if there had been any marked fluctuations in the disbursements of the Society which might indicate unfavourable economic circumstances as compared with previous years; (b) the consumption of milk during the period concerned (information under this heading was kindly supplied by the Secretary of the Cork District Milk Board;) (c) The consumption of fats. The importance of fats in nutrition (and especially in the case of tuberculous patients) is, of course, widely recognised. Owing to the demands of war industry fats are always in short supply during wars. Up to fairly recently the principal source of fat for the majority of the poorer classes was margarine, which commodity went completely off the market some considerable time ago when supplies of raw materials ceased to reach the country. The problem here was to find out if the loss of fats due to the cessation of the margarine supply has been compensated by increased consumption of butter. The information under this heading has been supplied by a large wholesale firm which has been accustomed to handle large quantities of butter and margarine for many years past. The information from these three sources may now be summarised.

(a) St. Vincent de Paul Society.

The disbursements of this Society in Cork during the past five years were as follows:—

		1938			1939			1940			1941			1942		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Bread	...	3854	19	3	3833	5	11	2704	0	0	2968	10	5	3110	14	10
Milk	...	1678	14	10	1963	7	3	1470	0	0	1426	9	8	1393	10	3
Coal	...	700	15	1	823	5	7	654	7	0	686	2	6	934	5	4
Groceries	...	278	9	4	345	0	0	353	0	0	395	4	5	429	12	2
Bedding	...	—			—			—			—			—		
Blankets	...	177	0	3	116	11	11	59	19	6	104	19	8	192	12	3
Boots	...	136	19	2	118	4	1	62	0	0	53	16	9	62	5	2
Clothing	...	91	5	3	82	9	11	52	8	5	44	6	11	63	19	6
Spec. Grants	...	681	19	11	765	4	3	641	2	6	640	7	2	610	17	1
Cash Grants	...	301	3	2	249	0	7	260	11	0	252	15	6	228	12	4
Penny Din'rs.	...	32	0	0	23	0	0	24	4	0	12	0	0	10	0	0
Clothing Soc'y.	...	50	0	0	50	0	0	—			66	13	0	50	0	0
Totals	...	£7983	6	3	£8369	9	6	£6281	12	5	£6651	6	0	£7086	8	11

The total amount disbursed in 1942 is some £960 less than the total 1938. This would appear to indicate a slight improvement in the general economic position. The maximum expenditure was in 1939 (£8,369), there was a sharp decline in 1940 and thereafter an increase of approximately £400 in each of the following years, not a very striking one taking the total disbursements into consideration. It would seem that the lessened calls on the Society's funds were largely determined by the increased flow of money into the City from England. There was a substantial reduction in the amount spent on milk in 1942 (£1,393) as compared with 1939 (£1,963) but this has been offset by the increased consumption which will be noted for the latter year in the figures supplied by the Milk Board. The figures supplied by this organisation cannot be said to throw any definite light on the problem.

(b) Consumption of Milk.

The following figures show the amount consumed in each year from 1938 to 1942.

Year	Total Quantity in Gallons	Daily Average in Gals.
1938	3,174,240	8,696
1939	3,132,516	8,582
1940	3,081,344	8,419
1941	3,094,574	8,478
1942	3,214,950	8,808

The increase noted for 1942 began in September with the introduction of the voucher scheme. The fact that the amount of milk consumed in 1942 exceeded that of the previous year by over 100,000 gallons is most gratifying to anyone who knows the prime importance of milk in nutrition. The average daily consumption of milk increased from 0.8 pint per person in 1938 to approximately 1 pint in 1942. The latter must be regarded as a satisfactory figure. These figures, like those preceding them do not help us in elucidating this matter. To a certain extent they are inter-locking with those which follow since the cream of milk is an important source of fat.

(c) Consumption of fats.

1940 (Year Ended December)

	Cwts.
Creamery Butter Produced	647,946
Farmers' „ „	480,000
	<hr/>
	1,137,956
Less Exports	262,222
	<hr/>
	875,734
 Margarine Produced	 123,008
Lard Produced	60,792
Dripping Produced	34,434
	<hr/>
	1,093,968

1942 (Year Ended December)

	Cwts.
Creamery Butter Produced	614,616
Farmers' Butter estd. Produced	480,000
	<hr/>
	1,094,616
 Margarine Produced	 Nil
Lard Produced	Not Available
Dripping Produced	Not Available

The following points arise in connection with these figures and were supplied by my informant.

1. 1940 was a normal year, i.e., full supplies of Butter and other edible fats were available.
2. 1941 from the point of view of statistics is very confusing. Margarine production ceased in August of that year. Some Butter was exported, but the figure is not given.
3. 1942. No Butter was exported. The official estimated figures for the production of Farmers' Butter is not available so far, so I have taken the 1940 figures as being approximately correct for 1942. It might, however, be safer to reduce it by the same percentage that Creamery Butter is down for that year as compared with 1940—about 6½%. No Margarine was produced for this year and the production figures are not yet available for Lard and Dripping. It will, however, be noted that without taking Lard and Dripping into consideration, the quantities of Butter made available for Home Consumption were almost the same as for 1940. On the other hand the disposition in the consumption of the 1942 production would I think, be somewhat different to the 1940 Vegetable and Animal Fats, such as Coconut Oil, Neutral Lard, from U.S.A. and Oleo Oil were in full supply to the Manufacturing Food Industries (Biscuits, Cakes and Chocolate and Sweets) in 1940, and were not in 1942. A quantity of Butter, above the normal, was used by these industries in 1942. I have no idea what this quantity was, but it might be available in the Department of Agriculture. Of course Butter so used would be consumed here indirectly also, though some would be lost in the export of biscuits, if there were exports. This quantity would, however, I think be very small.

It will be noted that the total quantities of fats produced in 1940 was 1,093,000 cwts. (approx.) and the amount in 1942, 1,094,000 cwts. (also approx.). From this it would appear that the total production in the latter year was slightly larger, without taking into account the production of lard and dripping. (The question arises here as to whether there was any *importation* of margarine in 1940. The figures above refer, apparently, to home produced margarine, lard and dripping. I am not in a position to answer). Leaving this question aside it would seem that there has been no falling off in the consumption of fats especially of butter and that the consumption of the latter has more than compensated for the withdrawal of margarine. There still remains, however, the further problem as to whether this increased consumption of butter has been maintained among all classes of the community or only amongst the well-to-do. It must be remembered that the Irish have always been heavy consumers of butter (I believe the highest consumers in the world). A large proportion of the margarine sold before August 1941 was probably used for cooking by such people and a proportion of the increased consumption of butter will represent a change over from margarine to butter for cooking. It may well be, therefore, that the poorer section of the community, unable to pay the increased price of butter have done without this article and so reduced their consumption of fat. To obtain definite information on this point would be a very difficult task involving specific enquiry among a very large number of small distributing agencies and among representative samples of householders—a source not always very reliable. With the information at our disposal one can only say that, by and large, the consumption of fats has not fallen off and, accordingly, that the increased mortality from tuberculosis cannot be accounted for under this heading.

It would seem, therefore, that neither environmental nor nutritional circumstances can account for this increase—at any rate with the information at present at our disposal. Is there any other factor concerned? This very problem has been under discussion in Great Britain, where a similar increase in tuberculosis mortality was noted but at a much earlier date than with us. In the *British Medical Journal* of September 27th, 1941, Dr. Stuart Laidlaw and Dr. Duncan McFarlane (both of the Public Health Department, Glasgow) examined this question and discuss the probable causes of the increase. The conclusions (under the various headings which might apply to this locality) were as follows :

1. Increased virulence of the tubercle bacillus—There was no evidence of such.
 2. Malnutrition and Deficient Diet—No evidence.
- (a) The State has controlled the distribution of essential foods in such a way that each individual has obtained a fixed minimum quantity sufficient to maintain him in good health. (b) It could be presumed that if deficiency of diet were the main factor the various age-groups would be equally affected when expressed on a percentage basis whereas the tables showed that the maximum increase occurred in the 15-45 age-group. They further pointed out that this group comprises the workers, many fewer of whom were unemployed and who, on account of higher wages, were able to feed themselves well. (*Note.*—The group here referred to is a rather large one in comparison with the groups set out above. It has suggested a comparison with a similar grouping for *this* area). The result is as follows :—

Year	...	15/45
1937	...	61
1938	...	66
1939	...	50
1940	...	70
1941	...	60
1942	...	65

The only striking feature about this table is the marked reduction in 1939. It throws no further light on the problem. A further subdivision into smaller groups was then taken.

Year	15/35	35/55	45/65
1937	38	40	30
1938	43	47	30
1939	31	41	32
1940	46	37	23
1941	34	44	28
1942	48	40	30

The figures for the 45/55 age-group have been included in each of the last two groups in order to make analagous series. This arrangement seems to bring out a feature not very clearly delineated in any other, that the increase seems to have mainly fallen on the 15/35 group. Not only is the increase greater in this group but the fluctuations from year to year are more marked. In comparison the other groups are less variable and there certainly is a much smaller increase from 1941 to 1942. This brings out the main point made by the above authors that if the increased deaths were due to malnutrition the increases would be more evenly distributed over the various age groups and also a further point made by them to which allusion will be made below.

3. Tubercle Bacilli in Milk—The authors point out that as the number of cases of abdominal tuberculosis remained stationery it indicates that this will not account for the increased incidence among non-pulmonary cases. (In our case there has been a reduction in the non-pulmonary deaths, so that this can hardly be a factor).
4. Strain of Army life, long hours in shelters, overcrowding in factories (factors which do not apply in this area) are discussed and the authors conclude that they have not been significant in producing the increase.
5. Overwork, strain and curtailed rest. The authors note that the main increase has been among the age-group 15/45 in males and 15/35 in females, the period of maximum working activity, when long hours of overtime are often undertaken. They also state that they have ascertained that young adults of both sexes were frequenting dance halls and picture houses with great regularity in numbers as high as, if not higher than, before the outbreak of the war.

The conclusions of these authors is that it is a combination of long hours, overtime, strain and ill-spent leisure which is the factor producing the rise in the number of cases of tuberculosis and it is assumed that the increase will be at least maintained so long as these factors remain unchanged.

Dr. R. M. Picken (Mansel Talbot, Professor of Preventive Medicine in the University of Wales) has also examined this problem (Public Health, April 1942). His conclusions agree with those of the authors cited above. He points out that the increased mortality occurred too soon after the outbreak of the war to be attributable to defects of nutrition (although these may come to play a bigger part later on). He concludes that it is more likely to have been due to the stress and strain of hard work, long hours, and irregularities of living which have been increasing in tempo since about 1935.

We cannot divorce the question of fatigue from that of nutrition and I have repeatedly drawn attention to this fact. There has been no decrease in recent years in the taste for dancing and similar entertainment for unduly prolonged periods—the trend has all been in the opposite direction and it is very significant that these three authors should have alluded to this fact as affecting the population in their particular localities. There is every indication that similar trends hold here and it is similarly significant that the only real increase in mortality figures is among the very group most affected by such practices, the 15/35 years group. The growth of the picture house cult too must have played a part. One has only to consider the long hours spent in the crowded, smoke-laden atmosphere to realise the opportunities created for the transmission not only of tuberculosis, but other infectious diseases as well. These factors have been at work for some time it is true but it seems quite clear that there has been a widespread increase in the dance hall habit in recent years which applies to rural as well as urban areas now. The late hours kept by the habitués of such places cannot but have a most deleterious effect in inducing fatigue and lowered resistance to disease. No one, I am sure, wishes to curtail unduly the legitimate amusements of the young but a distinction must be made between those which are harmless and those which are the opposite.

In the absence of more specific information as to the purchase and consumption of fats (and dairy produce generally) among the poorer section of the community and from the factual evidence that the increased mortality has fallen almost entirely upon one relatively small age-group one is forced to the conclusion that mal-nutrition has not played a significant part (so far, at any rate) in this increased mortality. I am inclined to the view that undue fatigue induced by bad habits of living may have played a part and that this condition of affairs has been aggravated by the continuous migration into the city area of people from the surrounding country districts, which migration has, in its turn, played a part in maintaining the unduly high mortality rates from tuberculosis which has been characteristic of this country.

In making this enquiry one has naturally been confined to an objective examination of the facts so far as it has been possible to ascertain them. This does not mean that all the facts have actually been available. It does not follow at all that because a proof is not forthcoming no proof exists; one must be cautious therefore in generalising. It may be quite true that there has been no falling-off in the consumption of fats but it does not follow from this that an increased consumption of fats is not a very important weapon in the fight against tuberculosis. It is indeed of prime importance and from this point of view the issue of P. H. Circular 53/43 authorising local authorities to supply tuberculous patients with extra nourishment in the form of milk, butter and eggs has been most welcome. This is a very important addition to the armentarium of the tuberculosis service but it is to be hoped that it is only a beginning and that the allowances in future will be on a more generous scale than that allowed so far. The addition of half a pint of milk and one egg daily with half a pound of butter per week to the dietary of tuberculous patients will be very welcome indeed. The importance of adequate nutrition

in the treatment and prevention of tuberculosis can scarcely be exaggerated and an ideal scheme in which financial considerations were not a limiting factor would certainly envisage an extension of the benefits to *contacts*. Bearing in mind the facts in regard to the mechanics of the spread of tuberculosis it is impossible to over-estimate the economic importance of maintaining adequate nutrition, especially in the second filial generation exposed to infection by contact with cases of open tuberculosis. These are the future recruits for the army of consumptives, keep up their nutrition and a very large proportion of them will put their primary infection over them successfully and continue to be useful healthy members of the community. From this point of view the provision of extra nourishment to the children of the poor is merely a form of social insurance which will mature in the form of dividends of improved communal health in the years to come. In any case, quite apart from such considerations, it is extremely doubtful if there is anyone who would object to increased expenditure on such an undertaking. Our experience is all against such a supposition.

ADMINISTRATION.

The routine administrative work of the Tuberculosis Dispensary is summarised in the following paragraphs.

The number of new patients examined at the Tuberculosis Dispensary during the year amounted to 283, of whom 143 were adults and 140 children. 67 of the adults and 30 of the children were found to be suffering from tuberculosis in one form or another and appropriate treatment was afforded.

As in former years the new cases dealt with at the Tuberculosis Dispensary who presented signs of advanced disease was disproportionately high. 62 per cent. of such were found to be in Stage III. and 34 per cent. in Stage II. ; in other words, no less than 96 per cent. of the new cases were suffering from definitely established disease recognisable by ordinary clinical methods. These figures are similar to those of former years and must be regarded with considerable dissatisfaction, as little or nothing can be done in regard to the treatment of such advanced cases apart from palliative methods. The main factor in the production of this state of affairs appears to be the failure of patients to seek treatment sufficiently early.

Table 27.—Showing the proportion of early, moderately advanced and advanced cases attending the Tuberculosis Clinic for the first time (1930 to 1942).

TYPE	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Stage I. (Early)	15%	8%	9%	6%	14%	13%	6%	9%	5%	8%	6%	3%	4%
Stage II. (Moderately Advanced)	36%	50%	38%	39%	28%	30%	43%	38%	33%	32%	44%	46%	34%
Stage III. (Advanced)	49%	42%	53%	55%	58%	57%	51%	53%	62%	60%	50%	51%	62%

The number of cases admitted to sanatorium during the year was as follows :—

		Males	Females	Total
Insured ...	...	21	10	31
Uninsured	...	1	8	9
Children...	...	—	—	—
		<hr/>	<hr/>	<hr/>
Total	...	22	18	40

The number of patients discharged from sanatorium during the year was as follows :

		Males	Females	Total
Insured ...	...	20	8	28
Uninsured	...	2	7	9
Children ...	...	—	—	—
		<hr/>	<hr/>	<hr/>
Total	...	22	15	37

Advanced cases who are not likely to derive benefit from sanatorium treatment who cannot receive adequate treatment in their own homes are admitted to St. Patrick's Hospital. The following cases were admitted during the year :—

		Males	Females	Total
Insured ...	...	21	4	25
Uninsured	...	6	19	25
		<hr/>	<hr/>	<hr/>
Total	...	27	23	50

The following cases died or were discharged from the Institution :

		Males	Females	Total
Insured ...	...	16	6	22
Uninsured	...	12	19	31
		<hr/>	<hr/>	<hr/>
Total	...	28	25	53

SPUTUM EXAMINATIONS.

Examinations of specimens of sputum is carried out in the laboratory attached to the Tuberculosis Clinic. 295 such specimens were examined during the past year, of which 81 were found to contain tubercle bacilli while 214 were negative. Of the 295 specimens examined 103 were submitted by medical practitioners. The following table shows the number of specimens examined, and the results obtained during the past nine years.

Year	Total	Positive	Negative
1931	375	90	285
1932	440	94	346
1933	502	118	384
1934	519	121	398
1935	512	94	418
1936	467	93	374
1937	511	73	438
1938	336	49	287
1939	228	51	177
1940	336	88	248
1941	276	68	208
1942	295	81	214
Totals ...	4797	1020	3777

In all cases attending the clinic, sputum examination is a routine procedure, and pocket flasks are issued to all those who are found to be positive. A register is kept of such cases and attention in regard to prevention is concentrated on them. Fifty flasks were issued during the year.

The number of notifications received during the year was 173. Prior to 1930 such notifications were for the period from the 1st April to 31st March following. Notifications for previous years were as follows—

1925-26	...	110	1934	...	112
1926-27	...	108	1935	...	154
1927-28	...	73	1936	...	154
1928-29	...	116	1937	...	166
1929-30	...	179	1938	...	147
1930 (April-Dec.)	...	133	1939	...	128
1931	...	196	1940	...	114
1932	...	136	1941	...	173
1933	...	164	1942	...	159

In the following table notifications, from the year 1930, have been analysed as to age and sex distribution.

Table 28.—Notifications of Tuberculosis distributed according to Sex and Age.

Year	Total	Sex	All Ages	Under 5 yrs	5-15	15-45	45-60	60 and up
1930	133	M	77	4	11	50	11	1
		F	56	5	11	37	2	1
1931	196	M	114	9	24	64	15	2
		F	82	7	19	53	3	—
1932	136	M	71	5	11	42	11	2
		F	65	1	6	48	7	3
1933	159	M	89	5	10	59	14	1
		F	70	5	8	48	8	1
1934	112	M	43	1	6	26	9	1
		F	69	4	10	41	9	5
1935	154	M	83	7	14	43	14	5
		F	71	5	15	40	7	4
1936	154	M	76	9	10	33	16	8
		F	78	3	12	55	6	2
1937	166	M	91	5	10	47	25	4
		F	75	2	10	52	5	6
1938	147	M	78	4	6	52	15	1
		F	69	4	10	49	5	1
1939	128	M	60	5	9	33	10	3
		F	68	3	3	54	6	2
1940	114	M	56	1	6	35	14	—
		F	58	5	4	41	6	2
1941	173	M	90	8	13	48	19	2
		F	83	8	14	51	7	3
1942	159	M	80	8	13	43	16	—
		F	79	3	18	48	6	4

The number of home visits made by the Tuberculosis Nurse was 579.

X-RAY EXAMINATION.

138 X-Ray examinations were carried out during the year. This form of examination is utilised for the most part in connection with cases presenting doubtful diagnostic features. All cases of bone and joint disease are subjected to X-Ray examination as routine. The method is also availed of very largely in connection with artificial pneumothorax treatment not only for the purpose of estimating, in the first instance, whether cases are suitable or not but, at a later stage to judge the progress which they are making.

ARTIFICIAL PNEUMOTHORAX.

Four new cases received artificial pneumothorax treatment during the year. These cases had their induction carried out at Heatherside Sanatorium by the R.M.S. Six cases are having refills and management at the Tuberculosis Clinic. Routine X-Ray examinations are made at the North Infirmary by arrangement with Dr. J. Fielding, Radiologist. The number of cases treated during the year was fourteen. 180 refills were given and 23 X-Ray examinations were made in connection with the treatment.

INSTITUTIONAL TREATMENT.

In the tables which follow statistical details are given of the various institutions which have been utilised for the treatment of our cases during the past year. Early and moderately early cases of pulmonary disease have, almost all, been referred to the Cork Sanatorium at Heather-side.

Table 29.—Particulars of patients who received sanatorium treatment during the year.

		Under treatment on 1st. Jan. 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec. 1942	No. of Cases treated during the year
Insured Males	...	6	19	17	8	25
„ Females	...	3	10	8	5	13
Uninsured Males	...	1	1	2	—	2
„ Females	...	2	8	7	3	10
Ex-Service men	...	2	2	3	1	4
Male Children	...	—	—	—	—	—
Female Children	...	—	—	—	—	—
Totals	...	14	40	37	17	54

Table 30.—Particulars of cases treated at Cork District Hospital.

		Under treatment on 1st. Jan. 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec., 1942	No. of Cases treated during the year
Male Adults	...	4	28	28	4	32
Female Adults	...	4	13	13	4	17
Male Children	...	4	4	5	3	8
Female Children	...	1	7	7	1	8
Totals	...	13	52	53	12	65

Table 31.—Particulars of patients treated in St. Patrick's Hospital during 1942.

	Under treatment on 1st. Jan. 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec. 1942	No. of Cases treated during the year
Insured Males ...	4	19	13	10	23
„ Females ...	2	4	6	—	6
Uninsured Males ...	7	6	12	1	13
„ Females ...	4	19	19	4	23
Ex-Servicemen ...	2	2	3	1	4
Male Children ...	1	—	1	—	1
Female children ...	1	1	2	—	2
Totals ...	21	51	56	16	72

Table 32.—Particulars of cases treated in the North Infirmary during 1942.

	Under treatment on 1st. Jan., 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec., 1942	No. of Cases treated during the year
Male children ...	—	2	2	—	2
„ adults ...	—	1	1	—	1
Female children ...	—	4	4	—	4
„ adults ...	—	3	3	—	3
Totals ...	—	10	10	—	10

Table 33.—Particulars of cases treated in the South Infirmary during 1942.

	Under treatment on 1st Jan., 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 194 2	No. of Cases treated during the year
Male children ...	—	9	6	3	9
„ adults ...	1	—	1	—	1
Female children ...	—	4	4	—	4
„ adults ...	—	1	1	—	1
Totals ...	1	14	12	3	15

Table 34.—Particulars of cases treated in St. Mary's Open-Air Hospital Cappagh, Co. Dublin.

		Under treatment on 1st Jan., 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1942	No. of Cases treated during the year
Female children	...	3	—	—	3	3
Male children	...	—	—	—	—	—
Totals	...	3	—	—	3	3

Table 35.—Particulars of cases treated at St. Joseph's Hospital, Mount Desert, during 1942.

		Under treatment on 1st Jan., 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1942	No. of Cases treated during the year
Insured Males	...	8	22	22	8	30
„ Females	...	6	12	12	6	18
Uninsured Males	...	2	4	6	—	6
„ Females	...	1	14	11	4	15
Male children	...	—	1	—	1	1
Female children	...	—	—	—	—	—
Totals	...	17	53	51	19	70

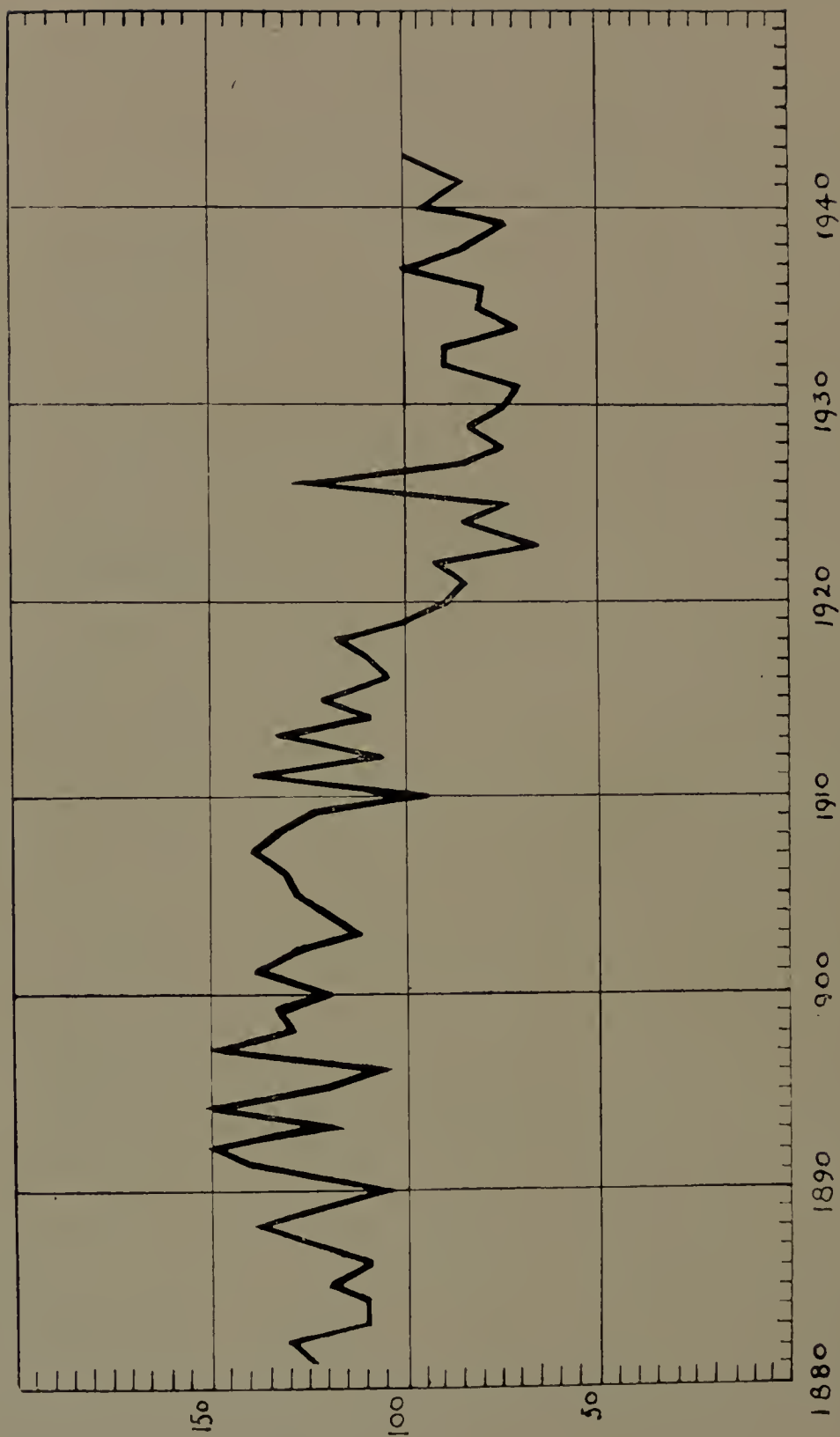
Table 36.—Particulars of cases treated at Coole Open-Air Hospital, Co. Westmeath.

		Under treatment on 1st Jan., 1942	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1942	No. of Cases treated during the year
Male children	...	4	—	1	3	4
Total	...	4	—	1	3	4

Table 37.—Return of number of patients treated under the Tuberculosis Scheme, during the year ended 31st December, 1942.

	Pulmonary Tuberculosis			Non-Pulmonary Tuberculosis			Total
	Children under 15 years	Other Persons		Children under 15 years	Other Persons		
		Males	Females		Males	Females	
1.— <i>Insured Patients :</i>							
(i) No. remaining under treatment							
(a) On 1st Jan., 1942 ...	—	65	34	—	4	3	106
(b) On 31 Dec., 1942 ...	—	72	40	—	2	2	116
(ii) No. of new patients treated during year ...	—	38	25	—	—	4	67
(iii) No. of cases under observation at close of year 1942 ...	—	1	—	—	—	—	1
2.— <i>Other Patients :</i>							
(i) No remaining under treatment							
(a) On 1st Jan., 1942 ...	1	31	42	48	2	8	132
(b) on 31st Dec., 1942 ...	4	26	43	49	3	9	130
(ii) No. of new patients treated during year ...	5	22	38	34	2	8	109
(iii) No of cases under observation at close of year 1942 ...	2	—	—	3	—	—	5

FIG. VII.—INFANT MORTALITY FROM 1880 TO PRESENT.



Section V.

Maternity and Child Welfare.

(A) INFANT MORTALITY.

The number of deaths of infants under one year of age amounted to 171, which is equivalent to an infant mortality rate of 100 per 1,000 live births. The corresponding figures last year were 142 and 85 per 1,000 respectively. The principal contributory causes were as follows :—

Diarrhoea and enteritis ...	...	...	49
Premature birth and congenital debility	...	...	48
Broncho-pneumonia ...	...	...	14
Marasmus ...	...	...	12
Convulsions ...	...	...	10

For the first time for many years diarrhoea and enteritis takes precedence over prematurity and congenital debility as the greatest contributory factor to infant mortality. The increased number of deaths from enteritis has also been the cause of the rise in the rate for the year. There was a serious outbreak of epidemic diarrhoea during the months of August and September (which has been fully discussed in the section devoted to infectious diseases) the exciting cause of which has been the substitution of artificial feeding for breast-feeding. Repeatedly in previous reports I have deplored the general decline in breast-feeding, which has been taking place for a number of years past and have drawn attention to the uncontrovertible facts which have come to light from our investigations as to the association of gastro-enteritis and high infant mortality with artificial feeding. It has been clearly established that in the vast majority of cases the prime cause of such conditions is artificial feeding, the secondary factors being lack of cleanliness and hygiene in the home as well as unhygienic methods of milk production. The only safe method of feeding infants and the only one independent of weather conditions and parental ignorance is that devised by nature.

We were handicapped in our efforts to cope with this epidemic by the demands made on our staff through the diphtheria epidemic which continued unabated while the diarrhoea outbreak was in full swing. During this period the attendances at the immunisation clinic were averaging over 400 per week and this called for a concentration of all

available services to the detriment of the child welfare branch which (according to accepted standards) is understaffed at ordinary times. In the Annual Report of the Chief Medical Officer of the Ministry of Health a standard of one Health Visitor to every 400 births per annum is laid down qualified by the observation that "even then the work is in many cases heavy and exacting." During the ten years covered by the period from 1933 to 1942 the average number of births registered in this city has been 1,693, so that according to the above standard we should have at least six health visitors allocated to this work in Cork. The actual number is three. In these circumstances it can hardly be expected that we can make much headway in reducing infant mortality especially when one takes into consideration the very low standard of housing in many areas in the city. In many areas in Great Britain the standard is as high as one health visitor to 160 births, we can scarcely hope to attain to such a high level in view of our limited financial resources but it is evident that with our present staff we cannot hope to cope adequately with all the problems which confront us.

Table 38.—Infant Mortality, Cork City, Éire, and England and Wales from 1881.

Year	Cork	Éire	E. & W.	Year	Cork	Éire	E. & W.
1881	124	89.4	139	1912	107	82.1	95
1882	127	94.9		1913	136	93.1	108
1883	109	95.0		1914	119	81.0	105
1884	110	91.9		1915	132	85.2	110
1885	120	91.3	145	1916	105	81.3	91
1886	110	93.9		1917	108	84.0	96
1887	123	93.6		1918	118	80.2	97
1888	139	96.0		1919	100	84.4	89
1889	125	92.0	144	1920	79	77.5	80
1890	106	91.6	151	1921	76	72.6	83
1891	138	91.4	149	1922	93	68.9	77
1892	150	99.9	148	1923	66	66.4	69
1893	132	99.8	159	1924	87	71.6	75
1894	150	97.4	137	1925	74	67.9	75
1895	131	98.0	161	1926	130	74.4	70
1896	106	91.0	148	1927	87	70.8	70
1897	152	104.0	156	1928	76	67.9	65
1898	131	105.2	160	1929	81	70.4	74
1899	133	103.2	163	1930	77	68	60
1900	120	105.3	154	1931	71	69	66
1901	139	95.5	151	1932	89	71	65
1902	127	95.2	133	1933	89	65	64
1903	112	92.2	132	1934	72	63	59
1904	118	95.8	145	1935	84	67	57
1905	131	90.2	128	1936	80	74	59
1906	133	88.0	132	1937	103	73	58
1907	139	88.5	118	1938	75	66	53
1908	134	91.2	120	1939	73	65	50
1909	125	87.3	109	1940	92	66	56
1910	96	89.1	105	1941	85	73	59
1911	139	91.3	130	1942	100	68	49

In Table 39 is set out a comparative statement of infant mortality in Cork, Dublin, Belfast, Limerick and Waterford from 1920 to 1941.

Table 39.—Infant mortality in Cork and other Irish Cities from 1920.

Year	Cork	Dublin*	Belfast†	Limerick*	Waterford*
1920 ...	79	152	132	109	96
1921 ...	76	143	115	113	102
1922 ...	93	120	94	108	94
1923 ...	66	117	101	128	78
1924 ...	87	119	107	90	93
1925 ...	74	117	104	91	106
1926 ...	130	127	112	146	114
1927 ...	87	123	101	102	83
1928 ...	76	102	103	117	105
1929 ...	81	106	112	118	110
1930 ...	77	97	78	114	91
1931 ...	71	94	90	120	92
1932 ...	89	100	111	91	132
1933 ...	89	83	102	126	103
1934 ...	72	80	80	76	92
1935 ...	84	94	112	106	126
1936 ...	80	114	102	95	90
1937 ...	102	102	94	68	97
1938 ...	75	96	96	70	99
1939 ...	73	90	86	59	73
1940 ...	95	91	122	70	111
1941 ...	85	118	91	95	88
1942 ...	100	105	90	78	87

* Figures for current year obtained from Annual Summary of Registrar-General. Those for previous years have been corrected from figures in the Annual Reports of the Registrar-General for the appropriate years.

† Figures obtained from Superintendent Medical Officer of Health.

Neo-natal Mortality. The role of neo-natal mortality (i.e., deaths of infants under one month old) in the following production of infant mortality is shewn in the following table.

Table 40.—Deaths of infants *under one month* in Cork City and the ratio of same to the total number of infant deaths (i.e., under one year), together with the comparative figures for the whole country.

Year	CORK CITY		ÉIRE. Relation of deaths under one month to all infant deaths
	Deaths under one month	Proportion to all infant deaths	
1931	41	30.1 per cent	38.4 per cent.
1932	47	29.6 " "	35.9 " "
1933	56	33.3 " "	39.7 " "
1934	43	29.9 " "	38.7 " "
1935	39	26.2 " "	39.9 " "
1936	56	36.8 " "	40.5 " "
1937	58	31.4 " "	41.7 " "
1938	34	27.2 " "	42.4 " "
1939	47	39.8 " "	44.1 " "
1940	45	29.4 " "	42.0 " "
1941	52	30.9 " "	41.2 " "
1942	52	32.9 " "	—

The causes of deaths of infants under one month were as follows :—

Prematurity, Congenital Debility and Malformations	40
Convulsions	3
Diarrhoea	3
Marasmus	2
Violence	2
Broncho-pneumonia	1
Cause not determinable	1
	—
	52

Table 42.—Éire. Principal causes of Infant Deaths (ratio per 1,000 Births). The corresponding figures for Cork City are shewn in Table 41.

Year	Congenital Debility	Prematurity	Diarrhoea and enteritis	Pneumonia	Convulsions	Congenital Malformations	Bronchitis	Whooping Cough
1931	16.00	8.58	8.27	7.72	6.78	3.38	3.17	1.16
1932	16.46	8.53	9.33	8.44	6.54	3.40	3.96	2.60
1933	14.38	9.59	8.92	6.99	5.61	3.59	2.79	2.54
1934	13.78	8.05	7.50	6.72	5.41	3.54	3.26	2.97
1935	14.19	9.76	10.65	8.08	4.50	3.90	3.40	1.05
1936	14.44	11.31	10.38	8.96	5.32	4.44	2.96	2.20
1937	13.65	12.16	9.95	8.34	4.99	4.39	2.92	2.46
1938	12.79	10.96	9.12	8.43	4.43	4.38	2.71	1.74
1939	12.68	11.02	9.33	7.67	4.48	4.82	2.35	1.37
1940	13.25	10.67	9.67	7.70	3.55	4.59	2.62	1.77
1941	14.14	11.57	14.18	7.93	4.23	5.57	2.34	1.46

The figures for 1942 are not yet available.

(B) NOTIFICATIONS OF BIRTHS.

The Acts bearing on this subject are the Notification of Births Acts, 1907, which was adopted by the Corporation in September, 1922, and the Notification of Births (Extension) Act, 1915. These Acts place an obligation on certain individuals to notify to the Medical Officer of Health within thirty-six hours, births which have occurred in the area. The object of the Acts is to enable the Local Authority to afford advice and assistance to parents on the care and upbringing of children.

The general procedure in connection with the notification of births was outlined in my Report for the year 1932. The total number of such notifications received during the year amounted to 1,605. The number of births *registered* during the same period, according to the Annual Summary of the Registrar-General was 1,706.

(C) MATERNAL MORTALITY.

There were 3 deaths under this heading during the year.

Table 43.—The number of deaths of women directly attributable to or associated with pregnancy or childbirth during each of the years 1924–42, together with the rate per 1,000 births during each of these years, for the City of Cork. (Corrected for Births and Deaths in public institutions).

Year	Deaths from Puerperal Septic Diseases		Deaths from accidents of Pregnancy or Childbirth		Total Deaths from Puerperal Septic Diseases and accidents of Pregnancy or Childbirth		Deaths from causes associated with Pregnancy or Childbirth (not included in foregoing)		Total Deaths caused by, or associated with Pregnancy or Childbirth	
	No.	Rate per 1000 Births	No.	Rate per 1000 Births	No.	Rate per 1000 Births	No.	Rate per 1000 Births	No.	Rate per 1000 Births
1924...	5	2.55	6	3.05	11	5.60	1	0.51	12	6.11
1925...	5	2.54	5	2.54	10	5.08	1	0.51	11	5.59
1926...	3	1.66	8	4.42	11	6.08	—	—	11	6.08
1927...	5	2.74	6	3.28	11	6.02	—	—	11	6.02
1928...	3	1.64	9	4.92	12	6.56	1	0.55	13	7.11
1929...	—	—	4	2.24	4	2.24	—	—	4	2.24
1930...	1	0.46	3	1.37	4	1.83	—	—	4	1.83
1931...	1	0.52	7	3.63	8	4.10	—	—	8	4.10
1932...	1	0.55	8	4.28	9	4.95	—	—	9	4.95
1933...	1	0.54	8	4.32	9	4.85	1	0.54	10	5.40
1934...	5	2.60	2	0.52	7	3.60	—	—	7	3.60
1935...	1	0.51	5	2.56	6	3.08	—	—	6	3.08
1936...	1	0.52	4	2.08	5	2.60	—	—	5	2.60
1937...	—	—	—	—	—	—	—	—	—	—
1938...	—	—	6	3.51	6	3.51	—	—	6	3.51
1939...	1	0.58	3	1.75	4	2.3	—	—	4	2.3
1940...	—	—	8	4.6	8	4.6	—	—	8	4.6
1941...	—	—	5	2.9	5	2.9	—	—	5	2.9
1942...	—	—	3	1.7	3	1.7	—	—	3	1.7

In Table 44 is set out the comparative maternal mortality for Cork, Dublin, Belfast, Limerick and Waterford County Boroughs, and for the whole country.

Table 44.—Maternal Mortality in different areas from 1920 to 1942 inclusive.

Year	Whole Country		Cork City		City of Dublin		Belfast		Limerick County Borough		Waterford County Borough	
	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births
1920	326	4.8	13	5.8	55	6.0	95	7.7	3	2.9	2	2.7
1921	336	5.5	8	4.0	53	6.5	53	4.7	1	1.0	3	5.1
1922	370	6.3	7	3.6	61	7.1	55	5.1	12	11.8	—	—
1923	328	5.3	4	1.9	46	5.5	58	5.3	16	5.6	3	4.9
1924	330	5.2	12	6.1	46	5.0	46	4.4	1	0.9	4	5.9
1925	312	5.0	11	5.6	42	4.9	29	2.8	3	2.8	4	6.4
1926	329	5.4	11	6.1	31	3.5	57	5.5	5	4.8	—	—
1927	291	4.8	11	6.0	23	2.8	36	3.7	5	4.8	3	4.7
1928	318	5.4	13	7.1	31	3.5	43	4.6	5	4.5	2	3.0
1929	283	4.9	4	2.2	30	3.4	43	4.8	7	6.2	1	1.6
1930	294	5.0	4	1.8	43	4.1	44	4.6	4	3.7	3	4.6
1931	272	4.7	8	4.1	29	2.1	54	5.7	4	3.5	3	4.5
1932	235	4.9	9	4.9	33	3.1	49	5.5	8	4.0	6	8.6
1933	255	4.4	10	5.4	22	2.1	42	5.2	7	7.1	2	2.8
1934	304	5.2	7	3.6	41	3.7	57	6.3	2	1.9	—	—
1935	272	4.6	6	3.0	38	3.3	54	6.0	6	5.5	4	4.0
1936	273	4.7	5	2.6	42	3.5	57	6.2	2	2.0	3	4.5
1937	204	3.3	—	—	33	2.8	56	6.1	3	2.9	4	5.8
1938	204	3.6	6	3.5	29	2.5	48	5.2	4	4.0	3	4.8
1939	150	2.7	4	2.3	23	2.0	—	4.4	1	1.0	1	1.6
1940	227	4.0	8	4.6	21	1.9	37	4.2	3	3.0	7	10.3
1941	209	3.7	5	2.9	21	1.8	31	3.6	3	3.0	1	1.6
1942	140	2.1	3	1.7	15	1.1	31	3.2	1	0.9	2	2.4

The above figures were obtained from the Annual Reports of the Registrar-General with the exception of those for the year 1942 (which were taken from the Annual Summary for that year) and those for Belfast, from 1922 onwards, which were kindly supplied by Dr. C. S. Thompson, Superintendent Medical Officer of Health. All figures include deaths from sepsis arising from abortion and miscarriage.

(D) SUPERVISION OF MIDWIVES.

1. Number of Midwives in Practice :—				
Certificate of C.M.B.	.....	...	...	50
Other recognised certificates	...	...	...	23
Total	...	...	...	73
2. Number of Midwives according to type of practice :—				
Attached to public institutions	...	...	...	6
Conducting only private maternity or nursing homes	...	...	...	11
Dealing with less than five cases per year	...	...	...	11
Monthly nurses	...	...	...	16
Others	...	...	...	35
Total	...	...	...	79
3. Number of visits of inspection of midwives	...	...	...	306
4. Disinfection of appliances	...	...	...	—
5. Reasons for summoning Medical help :—				
Abnormal presentation	...	...	...	36
Obstructed and delayed Labour	...	...	...	38
Post partum haemorrhage	...	...	...	9
Ante partum haemorrhage	...	...	...	6
Rise of Temperature	...	...	...	2
Ruptured perineum	...	...	...	10
6. Notifications of still births	...	...	...	74
7. Notifications of artificial feeding	...	...	...	85
8. Notifications of having laid-out dead bodies	...	...	...	3
9. Suspensions for twenty-four hours on account of contact with cases of infectious disease	...	...	...	—
10. Notifications of liability to be a source of infection	...	...	...	—
11. Notifications of deaths	...	...	...	71
12. Puerperal Pyrexia	...	...	...	4

It was unnecessary to undertake any legal proceedings against midwives during the year.

(E) WORK OF THE MATERNITY AND CHILD WELFARE
SCHEME.

The following is a summary of the work carried out during the year by the staff of the Centre.

Attendances of children under one year :—

(a) New Cases	...	...	2643
(b) Old Cases	...	...	3720

Attendances of Mothers with Children	...	8756
--------------------------------------	-----	------

Cases seen by the Medical Officer :—

(A) Under one year			
(1) New Cases	...	...	1198
(2) Old Cases	...	...	2352
(B) One to two years			
(1) New Cases	...	...	694
(2) Old Cases	...	...	900
(C) Two to five years			
(1) New Cases	...	...	506
(2) Old Cases	...	...	374
(D) Expectant Mothers			
(1) New Cases	...	...	490
(2) Old Cases	...	...	500

Analysis of cases dealt with by the Medical Officer :—

Consultations on infant feeding	934
Diseases of respiratory system	283
" new born	6
" reproductive system	3
" urinary system	16
" nervous system	4
" circulatory system	3
" alimentary system	668
" skin	278
" ears	58
" eyes	53
Exanthemata	35
Mental defects	3
Congenital defects	2
Orthopaedic defects	4
Rickets	7
Avitaminosis	41
Number of cases dealt with	2398
Number of attendances	6024

Ante-natal work—

Number of cases dealt with	...	490
Number of attendances	...	990

Return of Health Visitors' work—

(A) Under one year		
(1) Primary visits	...	1589
(2) Secondary visits	...	3876
(B) One to two years		
(1) Primary visits	...	1150
(2) Secondary visits	...	1274
(C) Two to five years		
(1) Primary visits	...	568
(2) Secondary visits	...	2108
(D) Expectant Mothers		
(1) Primary visits	...	720
(2) Secondary visits	...	551

The following cases were dealt with at the artificial sunlight clinic during the year :—

Avitaminosis	...	...	41
Debility	...	...	—
Rickets	...	...	7
Non-Pulmonary Tuberculosis	...	...	2
Anaemia	...	...	2
Number of cases treated	...	...	52
Number of Exposures	...	...	586

Section—VI. Control of Food Supplies

*The following report has been contributed by Mr. S. R. J. Cussen
Chief Veterinary Officer :—*

(A) SUPERVISION OF MILK.

590 samples of milk were examined in our laboratory during the year. These samples may be roughly divided into two groups :

1. Detailed bacteriological examination	...	269	samples
2. Dirt test only	... ..	321	„
Total		...	590

1. The first group *i. e.* those submitted to full examination comprised samples collected as follows (according to designation) with the addition of 10 samples of pasteurised milk.

Highest Grade	...	21
Standard	...	31
New Milk	...	195
Pasteurised	...	12
*Pre-pasteurised	...	10
Total		269

The following tests were applied to these samples :—

(a) Sedimentation Test.

The procedure was identical with that outlined in previous reports and the results obtained in the various grades were :—

		Highest Grade	Standard	New Milk	Pasteurised
Very Clean	...	10	12	119	—
Clean	...	7	18	223	—
Fairly Clean	...	1	2	88	10
Dirty	...	2	—	67	—
Very Dirty	...	—	—	19	—
		20	32	516	10

(Note—Col. 3, new Milk, comprises *all* samples submitted to the sedimentation test. This includes samples of ordinary market milk which were submitted to this test *only* as well as samples submitted to full bacteriological examination. Hence the discrepancy between the total for this column and the group above).

* The term *pre-pasteurised* denotes raw milk that has been collected at a pasteurising station and which is intended for pasteurisation.

The Sediment (or Dirt) test is a simple and reasonably reliable one. It does not pretend to absolute scientific accuracy, but as a rough and ready index of general trends in the direction of cleanliness it maintains its position in the armamentarium of the dairy bacteriologist. Since its chief value is that of an indicator of general tendencies the results obtained over a number of years are set out below. Examination of the next two tables will show that there appears to be a definite improvement in the matter of general cleanliness.

Table 45.—Ordinary Market Milk—Result of Dirt Test.

Year	No. of Samples	Very Clean	Clean	Fairly Clean	Dirty	Very Dirty
1930	412	8	72	118	156	58
1931	408	23	61	82	139	103
1932	630	4	27	108	265	226
1933	485	3	27	105	221	129
1934	339	—	19	51	148	121
1935	223	—	7	21	103	92
1936	227	3	21	43	106	54
1937	206	5	31	80	70	20
1938	174	3	36	83	49	3
1939	714	61	184	224	193	52
1940	736	163	251	176	115	31
1941	440	120	162	82	59	17
1942	516	119	223	88	67	19
Totals	5510	512	1121	1261	1691	925

In order to test the general tendency in regard to cleanliness the last two columns of this table have been taken together and further analysed. The results are shown in the next table.

Table 46.—Ordinary Market Milk—Proportion of Samples classified as "Dirty" 1930-1942.

Year	No. of Samples	Dirty	Proportion
1930	412	214	51.9 per cent.
1931	408	242	59.3 "
1932	630	491	77.9 "
1933	485	350	72.2 "
1934	339	269	79.3 "
1935	223	195	87.4 "
1936	227	160	70.9 "
1937	206	90	43.6 "
1938	174	52	29.8 "
1939	714	245	33.9 "
1940	736	146	19.8 "
1941	440	76	17.2 "
1942	516	86	16.6 "

(b) **Microscopic Test.**

247 samples were submitted to routine microscopic examination. Acid-fast organisms were detected in one of those samples, streptococci were present in 11 and pus cells in 3, and blood in 1. In 231 instances the samples were free from suspicious organisms.

(c) **Bacteria of Faecal Origin.**

Determination of organisms of this character has been a routine for a number of years. Included in this group is *B. Coli*, the presence of which may be regarded as proving carelessness in the production and handling of milk. A full account of the test has been given in previous reports. The findings for the year were as follows :—

Table 47.—Results of Tests for presence of *B. Coli* in Milk.

Designation	No. of Samples Examined	<i>B. Coli</i> Present	Proportion Free from <i>B. Coli</i>
Highest Grade ...	20	4	80.0 per cent.
Standard ...	32	10	68.9 „
Ordinary Market Milk ...	195	12	93.8 „

(d) **Pathogenic Bacteria.**

Under this heading our principal concern is the presence of the *tubercle bacillus* in milk. Other organisms (*e.g.*, streptococci) are also concerned in a minor role and have been alluded to under the heading of microscopic examination. The biological test (involving the use of guinea pigs) is the only reliable test for *tubercle bacillus* and the results obtained over a number of years are set out in columnar form as follows :—

Table 48.—*Tubercle Bacilli* in Milk—Results of Biological Tests.

Year	No. of Tests	Positive	Proportion Positive
1931	2	—	—
1932	14	1	7.1 per cent.
1933	63	—	—
1934	10	—	—
1935	25	4	16.0 „
1936	201	13	6.4 „
1937	23	—	—
1938	90	7	7.7 „
1939	71	5	7.0 „
1940	94	4	4.2 „
1941	96	4	4.1 „
1942	105	2	1.9 „
Total	792	40	5.0 „

The figures for individual years are, on the whole, on the small side so far as reliable information is concerned. The sum total, however, of some 790 tests yielding an approximate proportion of 5.0 per cent. positive may be regarded as a fairly accurate index of the amount of tubercle infection in the local milk supply. This is one aspect of the milk problem which recent legislation has done nothing to solve.

(e) **The Reductase Test.**

The modified method of Wilson has been used. As in the case of other tests mentioned, this method has been fully described in previous reports. Briefly, by means of a colour index which takes into account the rate of decolourisation of a standard solution of methylene blue added to given quantities of milk maintained at a standard temperature, the bacterial content (in numbers) can be estimated. The results obtained are set out below and in order to assist in the interpretation of these results it seems desirable to specify the values attached to the various grades :

Grade I	...	Less than 500,000 bacteria per c.c.
Grade II	...	500,000 to 4 million bacteria per c.c.
Grade III	...	4 million to 20 million bacteria per c.c.
Grade IV	...	Over 20 million per c.c.

Particulars of the various samples and the results obtained are set out below :

(a) Highest Grade Milk—

Grade I	...	14
Grade II	...	2
Grade III	...	2
Grade IV	...	0
		—
		18

(b) Standard Milk—

Grade I	...	22
Grade II	...	7
Grade III	...	7
Grade IV	...	3
		—
		39

(c) Ordinary Milk—

Grade I	...	120
Grade II	...	23
Grade III	...	18
Grade IV	...	12
		—
		173

For *pasteurised* milk and *pre-pasteurised** milk plating on nutrient media with direct colony counts was substituted for the Reductase test and by this method the following results were obtained :

Pasteurised		Pre-pasteurised*	
Sample Number	Bacteria per c.c.	Sample Number	Bacteria per c.c.
1	20,000	1	133,000
2	68,000	2	135,000
3	20,000	3	48,000
4	58,000	4	320,000
5	25,000	5	432,000
6	250,000	6	704,000
7	51,000	7	1,152,000
8	89,000	8	420,000
9	24,000	9	2,100,000
10	390,000	10	156,000
11	90,000	—	—
12	34,000	—	—

*See footnote on page 72.

Bacteriological Examinations.

- (a) 143 samples were submitted to the Chief Veterinary Officer by the County M.O.H. of milk collected in creameries in the County Area. Collection and examination was at the instance of the Local Government Department.
- (b) On behalf of the Department 74 samples of Designated Milk were collected in the urban area and examined in our Laboratory.

Prosecutions.

(A) MILK AND DAIRIES ACT, 1935.

41 persons were prosecuted for non-observance of the above Act.

35 convictions were obtained and fines amounting to £13 4s. 6d. imposed. 5 cases were marked proved and 1 was dismissed.

With reference to the successful prosecutions—

3	summonses	were	brought	under	Section	24
30	"	"	"	"	"	59
7	"	"	"	"	"	60
1	was under sec. 65					

Section 24.—Relates to the prohibition of the sale of milk by un-registered dairymen or on unregistered premises.

Section 59.—Relates to the prohibition of the sale of dirty milk.

Section 60.—Relates to the sale of milk in public places and prescribes for the conspicuous inscription of the dairyman's name and address on the vehicle, car or receptacle and the words *Bainne ar díol Machtar ar díol* or *Bláthach ar díol*.

Section 65.—Relates to obstruction of officers of the Corporation in the discharge of their duties under the Act.

Table 49.—Showing detailed results of proceedings against persons for infringements of the *Milk and Dairies Act*, 1935.

Prosecution under Section	Fines Imposed	Prosecution under Section	Fines Imposed
59	5/- and costs	59	10/- and costs
59	10/- "	59	7/6 "
59	7/6 "	60	10/- "
24	3/6 "	60	Dismissed
59	7/6 "	59	7/6 and costs
59	5/- "	60	Proved
24	Proved	59	10/- and costs
59	20/- and costs	59	10/- "
59	10/- "	59	Proved
59	5/- "	59	15/- and costs
59	7/6 "	59	5/- "
60	5/- "	59	7/6 "
60	3/6 "	59	7/6 "
59	7/6 "	59	7/6 "
59	5/- "	24	Proved
59	5/- "	60	5/- and costs
59	7/6 "	59	5/- "
59	10/- "	60	10/- "
65	Proved	59	7/6 "
59	5/- "	59	5/- "
—	—	59	5/- "

(B) THE MILK AND DAIRIES REGULATIONS, 1936.

and

THE MILK AND DAIRIES (BACTERIOLOGICAL EXAMINATION) REGULATIONS, 1936.

43 persons were prosecuted for non-observance of the above Regulations.

27 convictions were obtained and fines amounting to £6 9s. 6d. imposed.

14 cases were marked proved, 1 dismissed and 1 withdrawn on payment of costs.

With reference to the successful prosecutions, particulars are appended herewith of the enactments concerned with the summonses which were undertaken.

(a) The Milk and Dairies Regulations, 1936.

1	under article	20
3	" "	21
2	" "	22 (2)
6	" "	22 (3)
6	" "	22 (5)
1	" "	25
1	" "	25 (4)
10	" "	27
2	" "	28
1	" "	29
1	" "	29 (2)
3	" "	40
4	" "	42 (1)
2	" "	42 (2)

Article 20 relates to the cleansing of yards and passages adjacent to cowsheds.

Article 21 relates to the cleansing of milk Stores, Milk Shops and appliances.

Article 22 (2) Relates to the incapability of certain Vessels or Appliances being easily cleaned.

Article 22 (3) relates to the cleansing of Vessels and appliances.

Article 22(5) relates to the storing of Vessels and appliances.

Article 25 relates to the storing or depositing of Milk in places where it is likely to become contaminated by dust, dirt or impure air, etc.

Article 25 (4) relates to the storing of Milk in kitchens sculleries or other objectional places.

Article 27 relates to the prevention of contamination by dust, dirt or flies.

Article 28 relates to the cleanliness of persons having access to milk.

Article 29 relates to the precautions to be taken of animals in a dairy from remaining in a dirty condition.

Article 29 (2) Prescribes that the hair on the quarters, the flanks, the tail, and portions adjacent to the udder shall be kept cut short.

Article 40 relates to vehicles used for conveyance of milk.

Article 42 (1) Prescribes that every sale container be provided with a tap.

Article 42 (2) relates to the taking of milk from a sale container other than by means of the tap.

Article 43 (1) Prescribes that no unauthorised person shall open any closed receptacle containing milk in any place which is not part of a registered dairy.

Table 50.—Detailed results of proceedings against persons for infringements of the *Milk and Dairies Regulations, 1936.*

Prosecution under Article	Fines Imposed	Prosecution under Article	Fines Imposed
27	3/6 and costs	22 (3)	5/- and costs
22 (3)	3/6 "	42	Proved
22 (5)	3/6 "	22 (5)	Dismissed
21	3/6 "	22 (2)	5/- and costs
27	3/6 "	22 (3)	5/- "
25	7/6 "	22 (5)	Proved
22 (5)	Proved	42 (2)	5/- and costs
27	"	27	Proved
25 (4)	5/- and costs	27	3/6 and costs
27	Proved	40	7/6 "
29	10/- and costs	42	1/- "
29 (2)	Proved	22 (5)	2/6 "
21	10/- and costs	27	Proved
20	Proved	27	5/- and costs
22 (3)	"	22 (3)	5/- "
40	5/- and costs	27	2/6 "
22 (3)	5/- "	21	7/6 "
42 (1)	Proved	22 (5)	Proved
28	5/- and costs	27	2/6 and costs
42 (2)	2/6 "	—	—
40	Withdrawn	—	—
28	5/- and costs	—	—

NOTICES SERVED.

The number of notices sent out under the Milk and Dairies Act and Regulations was 75.

MEAT INSPECTION.

Meat Inspection Depot :—4,242 bovine carcasses were examined. Of this number 683 (15.9%) were found to be affected with varying degrees of tuberculosis. It was found necessary that 10 such carcasses (0.23%) should be totally condemned as unfit for consumption, while 673 (15.7%) were partially condemned. In addition to the 4,242 bovine carcasses above referred to, 1,387 sheep carcasses were also examined at the Depot, and of this number 4 carcasses (0.28%) were totally condemned for diseases other than tuberculosis. 551 veal carcasses were also examined at the Depot and of this number 1 carcass was totally condemned and 28 carcasses partially condemned as being affected with tuberculosis. 384 pork carcasses were also examined and of this number 2 carcasses (0.52%) were totally condemned and 47 carcasses (12.2%) partially condemned as being affected with tuberculosis. For diseases other than tuberculosis 3 bovine carcasses (0.07%) were wholly condemned and 9 partially (0.21%) For similar reasons 1 veal carcass (0.19%) and 29 pork carcasses (7.5%) were wholly condemned.

Table 51.—The amount (by weight) of meat examined and condemned at the Depot was as follows :—

Variety	Quantity Examined	Tuberculosis		Other Diseases	
		Quantity Condemned	Pro-portion	Quantity Condemned	Pro-portion
	lbs.	lbs.		lbs.	
Beef ...	2,121,000	6,944	0.32%	680	0.03%
Mutton ...	83,220	—	—	240	0.28%
Veal ...	110,200	240	0.21%	145	0.13%
Pork ...	26,880	546	2.03%	1,450	5.39%

The amount of offals condemned at the Depot for Tuberculosis and other conditions was as follows :—

Part	Tuberculosis	Other Diseases	Total
Lungs ...	1,008	38	1,046
Heart ...	504	26	528
Livers ...	158	310	468
Kidneys ...	44	4	48
Head and Tongues ...	346	3	349
Total	2,060	381	2,439

Meat seized in shops and voluntarily surrendered during the year :—

	Seized	Surrendered
Beef ...	1,540½ lbs.	73,339 lbs.
Pork ...	40 "	37,117 "
Bacon ...	16½ "	45 "
Veal ...	—	802 "
Fish ...	—	694 "
Fruit ...	—	14 "

Slaughterhouses and Bacon Factories.

Table 52.—**Tuberculosis.** The following are particulars of animals killed in local slaughterhouses and the incidence of tuberculosis therein.

Species	Number	Affected	Totally Condemned	Partially Condemned
Cattle ...	2,768	1,061 (38.3%)	27 (0.97%)	1,034 (37.3%)
Sheep ...	13,040	—	—	—
Pigs ..	1,420	94 (6.6%)	5 (0.35%)	89 (6.2%)

51,019 lbs. of Beef (representing 3.6% of the quantity examined) were condemned on account of Tuberculosis.

1,252 lbs. of Pork (0.52%) were condemned on account of Tuberculosis.

Bacon Factories :—Particulars of pigs slaughtered in bacon factories and reserved for local consumption in the form of pork and sausages were supplied to us by the Veterinary Inspectors of the Department of Agriculture. The number of pigs was 1,561 of which 550 (35.2%) were found to be affected with Tuberculosis. 21 of these (1.3%) were totally condemned and 529 (33.8%) partially condemned.

27,610 lbs. (4.8%) of pork were condemned on account of Tuberculosis.

Table 53.—**Diseases other than Tuberculosis.** Particulars of incidence found in slaughterhouses killings :—

Species	Number	Affected	Totally Condemned	Partially Condemned
Cattle ...	2,768	11 (0.39%)	3 (0.10%)	8 (0.28%)
Sheep ...	13,040	—	—	—
Pigs ...	1,420	4 (0.28%)	1 (0.07%)	3 (0.27%)

7,718 lbs. of Beef (representing 0.55% of the quantity examined) were condemned on account of diseases other than Tuberculosis.

146 lbs. of Pork (0.18%) were condemned on account of diseases other than Tuberculosis.

Bacon Factories :—Less than 0.09% of Pork was condemned on account of diseases other than Tuberculosis.

Table 54.—Inspections carried out in *slaughterhouses* by our veterinary staff were as follows :—

Species	Carcases Examined	Condemned		
		Wholly	Partially	Meat & Offals
Cattle ...	2,768	30	1,042	58,737 lbs.
Sheep ...	13,040	—	—	—
Pigs ...	1,420	6	92	2,766

PROSECUTIONS.

Particulars	Fine	Particulars	Fine
Tuberculosis Beef	40/- and costs	Tuberculosis Pork	10/- and costs
" "	5/- "	Unsound Cooked	
Unsound Meat	Withdrawn on Payment of costs	Meat	20/- ..
Tuberculosis Beef	5/- and costs	Tuberculosis Beef	7/6 ..
" "	10/- "	" "	7/6 ..
Tainted Fowl	10/- "	" "	20/- ..
Tuberculosis Beef	Proved	" "	60/- ..
Unsound Meat	20/- and costs	" "	20/- ..
Tuberculosis Beef	Withdrawn on Payment of costs	" "	40/- ..
Tainted Bacon	5/- and costs	" "	10/- ..

THE SLAUGHTER OF ANIMALS ACT, 1935.

The provisions of this Act were outlined in the 1937 Annual Report, it is not proposed to make further reference to them here.

The provisions of the Act were not reasonably observed by occupiers of slaughterhouses and slaughtermen. Consequently there were 30 prosecutions under the Act during the period under review.

The Sections under which summonses were effected were :—

- (a) Section 15—Failure to use an approved instrument.
- (b) Section 18—Registered occupier of a slaughterhouse permitting an offence under the Act to be committed on his premises.
- (c) Section 19—Slaughtering without being the holder of a licence for the time being in force.

Fines amounting to £9 0s. 6d. and costs were imposed in these 30 cases which brings the total amount of persons convicted under the Act since its inception to 44 and the total amount of fines to £16 14s. 0d.

There are at present 36 persons licensed to use the humane slaughter instrument.

The number of premises within the Cork Urban Sanitary District where meat and meat products are prepared for human consumption is as follows :—

Slaughter Houses—

Licensed (under Public Health Act, 1878)	...	...	20
Registered (being in use before the 1878 Act)	...	...	1
Registered (under the Fresh Meat Act)	...	...	1

Bacon Factories—

Where Pigs are slaughtered for Production of Bacon	...	...	4
Where Pigs are slaughtered for Bacon and Pork	...	...	4
Where Cattle and Sheep are slaughtered in addition to Pigs for Bacon and Pork	...	...	4

Sausage Factories 13

Triperies 8

Number of inspections made of premises where meat is prepared and sold :—

Slaughter Houses	...	...	...	3,852
Sausage Factories	...	...	...	865
Triperies	...	...	...	1,527
Meat Markets	...	...	...	728
Butcher Shops	...	...	...	2,024
Pork Shops	...	...	...	129

In addition to the above the following inspections were made of provision shops, fish shops and hawkers stands :—

Provision Shops	...	...	...	635
Fish Shops	...	...	...	122
Fruit Shops	...	...	...	147
Hawker's Stands	...	...	...	1,030

The number of Notices served to abate nuisances and remedy defects in Slaughterhouses and Triperies—22.

(C) FOOD AND DRUG ACTS.

MILK.

Appended herewith is the Report of the City Analyst (Mr. D. J. O'Sullivan, M.Sc., F.I.C.)

Table 55.—Showing the number of samples of Milk submitted for Analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adulterated
March 31st, 1942 ...	153	147	6
June 30th, 1942 ...	177	154	23
Sept. 30th, 1942 ...	177	169	8
Dec. 31st, 1942 ...	136	133	3
Totals ...	643	603	40

Table 56.—Showing results of proceedings against vendors of adulterated samples and fines imposed.

Extent and form of Adulteration					Fines Imposed	
Deficient in Milk Fat	13% in Solids, not Fat— %				Fines	Costs
" "	8%	"	"	—	7/6	15/9
" "	6%	"	"	—	5/-	15/9
" "	6%	"	"	—	5/-	15/9
" "	—	"	"	—	3/6	17/9
" "	—	"	"	17%	—	—
" "	—	"	"	7%	—	—
" "	—	"	"	7%	—	—
" "	1%	"	"	6%	—	—
" "	1 1/2%	"	"	16%	40/-	84/6
" "	6%	"	"	—	5/-	15/9
" "	—	"	"	8%	—	—
" "	1%	"	"	—	7/6	15/9
" "	10%	"	"	—	Nil	15/8
" "	6%	"	"	—	3/6	15/9
" "	0%	"	"	—	5/-	15/9
" "	8%	"	"	—	5/-	17/9
" "	2 1/2%	"	"	—	7/6	15/9
" "	1 1/2%	"	"	—	5/-	15/9
" "	16 1/2%	"	"	—	5/-	15/9
" "	6%	"	"	—	3/6	15/9
" "	10%	"	"	—	5/-	15/9
" "	50%	"	"	—	15/-	15/9
" "	10%	"	"	—	5/-	15/9
" "	21%	"	"	—	7/6	15/9
" "	6%	"	"	—	3/6	15/9
" "	—	"	"	9%	7/6	15/9
" "	—	"	"	12%	20/-	17/9
" "	28%	"	"	—	10/-	15/9

BUTTER.

Table 57.—Showing number of Samples of Butter submitted for analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1942 ...	31	31	—
June 30th, 1942 ...	33	33	—
Sept. 30th, 1942 ...	31	30	1
Dec. 31st 1942 ...	31	31	—
Totals ...	126	125	1

Table 58.—Showing results of proceedings against vendors of adulterated samples and fines imposed.

Extent and form of Adulteration	Fine	Costs
Butter + 3.1% excess water ...	5 /—	17 /2

SPIRITS.

Table 59.—Showing the number of samples of Spirits submitted for analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1942 ...	2	2	—
June 30th, 1942 ...	4	2	2
Sept. 30th, 1942 ...	3	2	1
Dec. 31st, 1942 ...	9	8	1
Totals ...	18	14	4

Table 60.—Showing the number of miscellaneous samples submitted for analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1942	101	99	2
June 30th, 1942 ...	96	96	—
Sept. 30th, 1942 ...	85	82	3
Dec., 31st 1942 ...	117	95	22
Totals ...	399	372	27

Table 61.—Showing details in regard to miscellaneous samples examined during the year.

Articles	Mar. 31st	June 30th	Sept. 30th	Dec. 31st
Sweets ...	—	1	—	1
Condensed Milk ...	—	2	2	—
Black Pudding ...	6	1	1	3
Drugs ...	13	7	1	3
Sugar ...	4	1	—	—
Rice ...	2	1	5	6
Confectionery ...	3	7	11	3
Cheese ...	13	11	12	10
Cream ...	1	3	4	5
Jam ...	8	11	11	8
Cocoa ...	—	—	—	1
Gravy Powder ...	—	—	—	1
Vinegar ...	6	3	3	—
Pepper ...	1	1	—	—
Sausages ...	9	8	4	7
Fish Paste ...	1	1	1	—
Flour ...	3	1	1	6
Baking Powder ...	1	3	0	2
Beer ...	—	7	3	13
Dripping ...	—	1	2	—
Sauce ...	5	3	2	3
Lard ...	1	1	—	—
Bread Soda ...	—	1	—	2
Wine ...	1	—	1	—
Cider ...	—	1	—	2
Coffee ...	1	2	3	—
Custard Powder ...	2	2	1	23
Mineral Waters ...	3	2	6	4
Jelly ...	—	—	1	2
Neaves Food ...	—	—	—	1
Cornflour ...	—	—	1	—
Suet ...	—	1	—	1
Bovril ...	1	1	—	1
Bread ...	1	2	—	2
Oatmeal ...	1	—	—	—
Pearl Barley ...	1	—	1	—
Meat Cubes ...	—	1	—	—
Pea Flour ...	1	—	—	—
Sago ...	—	—	1	—
Salad Cream ...	—	1	2	—
Tapioca ...	1	—	—	—
Soup ...	2	—	—	2
Cooked Meat ...	—	1	2	—
Tinned Soup ...	—	1	1	—
Chocolate ...	—	1	—	—
Egg Powder ...	2	—	—	1
Coffee Essence ...	1	—	1	2
Coffee Substitute ...	1	2	—	—
Puddena ...	1	—	—	—
Sponge Mixture ...	1	—	—	—
Peas ...	1	—	—	—
Tea Saver ...	1	—	—	—
Ice Cream ...	—	1	1	—
Spice ...	—	1	—	—
Lemonade Powder ...	—	1	—	—
Pepper Compound ...	—	1	—	—

REMARKS.

The proportion of adulterated samples, usually about 5% of the whole, showed an increase during the year to 6%. This increase is principally due to the sale of a large number of unsatisfactory samples of custard powder.

Custard is “a dish made of eggs, milk and sugar and baked or boiled” ; but custard powder is (or has been) nothing but a purified starch coloured with a yellow dye to give the appearance of eggs and flavoured, and marketed with assiduous advertising.

The starch most often used was derived from maize by grinding and eliminating all the other elements of the grain by chemical and mechanical means. This processing rendered the starch practically self-sterile, so that a custard powder prepared from it would keep indefinitely. Maize starch was selected because of its better jellying power; but any other starch similarly prepared could not be deemed objectionable. Nevertheless custard powder could never make a real custard; but it became recognised for the purposes of the Acts as a distinct article. It attained what may be called a first degree of substitution.

When maize starch became scarce a number of firms, ignoring the necessity of processing, issued coloured and flavoured flours, mostly wheaten but sometimes of barley, as custard powders. In time these flours, not being self-sterile, developed cereal mites and deteriorated. In some cases they were found to be a seething mass of mites. They were of a second degree of substitution. Their appearance was immediately reported to the Public Health Department.

When the vendors were prosecuted the Court accepted the definition of Custard Powder advanced and inflicted fines. Further, the Court also agreed that a coloured and flavoured flour, even when without cereal mites, is not custard powder.

The costings for these articles deserve mention. Flour is sold at a controlled price of 3/- per stone. The cost of colouring and flavouring it is negligible, and there were no advertising charges. These custard powders were sold at about 1/- for 8 ozs. or 28/- per stone.

Their disappearance from the market need not cause any hardship because any housewife can replace them by preparing an ordinary white sauce "coloured and flavoured to taste."

Spirits—The adulterated samples—4 out of 18—represent a very high proportion.

Rice—The rice trade imported some 400 tons of American rice containing more than the usual amount of tale as a "facing." (Tale is French Chalk such as is used in the repair of bicycle tubes). The 100 lb. bags in which the rice was imported were clearly branded: "Coated with glucose and tale. Remove by washing before using," according to the American fashion. The trade—importers, wholesalers and retailers—refused to give the benefit of this declaration to the public and insisted that they were not bound by the recommendation in Dr. Hamill's Report to the Local Government Board in 1909 "On 'facing' and other methods of preparing rice for sale" which limited the amount of tale to 0.5 per cent.

The trade, producing their own experts, succeeded in the District Courts. But an appeal to the Circuit Court has established the principle of Dr. Hamill's Report. Rice containing more than 0.5% of tale must now be sold duly labelled as such.

Section VII.—Water Supply.

BACTERIOLOGICAL EXAMINATIONS.

In the report for 1931 I outlined the procedure adopted in connection with the examination of the supply at the bacteriological laboratories of University College, Cork, by Prof. W. J. O'Donovan. In the year 1928 Dr. O'Donovan undertook a detailed and systematic examination in which a very large number of samples were studied. Our subsequent procedure has been based on his findings of that year and his recommendations have resulted in a supply of a consistently high degree of purity. In 1942, as in former years, samples were collected and examined on five days during each week. The procedure included an estimate of the number of bacteria growing at 37° C. in 24 hours. The total number of samples examined amounted to 254. The average number of bacteria in 1 c.c. was 4.16 and the number of samples sterile in 1 c.c. was 39.

The routine procedure in connection with these examinations is that samples are collected by the staff of the Public Health Department in special sterilised bottles. These samples are transmitted to the Laboratory for examination. A report is sent daily to the Medical Officer of Health who, in turn, sends a copy to the Water Engineer. In the event of an unsatisfactory sample coming to light in the laboratory the subsequent cycle of events is speeded up by telephonic communications between the various departments pending receipt of a subsequent formal report. In this manner there is exercised a triple check in the purification and distribution of the supply.

In the following tables are summarised the results of the various examinations carried out during the year (and previous years) at the Bacteriological Laboratories, U.C.C., by Prof. O'Donovan and his staff.

Table 62.—Summary of results of routine examinations of water

Total Routine Samples of Tap Water	Bacillus Coli Test					Average daily No. of Bacteria per c.c.	No. of Samples sterile in 1 c.c.
	100 c.c's —ive	100 c.c's +ive	50 c.c's +ive	10 c.c's +ive	1 c.c's +ive		
245	244	3	2	5	—	4.16	39

As stated above, the examinations carried out during the year included an estimation of the numbers of bacteria growing at 37° C. in 24 hours. The findings are set out in the following table and compared with those of 1932 (in which year the figures were first computed) and following years.

Table 63.—Average number of bacteria per cubic centimetre growing at 37° C. from daily sample for each month.

Month	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
January	14.0	1.8	1.1	2.9	1.2	4.1	1.8	1.7	1.8	2.2	3.4
February	0.8	1.0	1.6	2.7	1.2	2.8	2.2	1.4	5.3	0.7	2.7
March	1.6	1.1	1.3	1.6	0.9	1.4	1.9	2.9	1.8	2.8	7.0
April	4.6	1.5	1.4	1.0	1.6	1.2	1.5	2.6	1.0	1.6	2.6
May	4.5	1.8	3.4	2.7	1.9	0.7	0.9	1.7	1.3	10.1	2.5
June	5.4	4.1	21.2	2.1	1.9	0.2	1.4	21.5	4.4	7.3	3.9
July	44.1	19.2	18.4	2.9	5.0	3.7	2.0	6.6	11.8	4.6	5.8
August	20.3	14.6	7.4	5.2	1.8	1.0	1.4	6.7	4.2	4.1	4.9
September	2.2	2.7	1.7	8.9	3.4	2.8	2.2	3.0	4.5	1.4	6.4
October	4.6	2.1	4.0	7.9	1.4	6.4	2.0	30.8	4.5	1.6	2.1
November	4.7	1.3	4.2	4.4	2.7	2.8	2.6	9.4	4.5	7.2	4.8
December	2.2	3.9	4.0	1.2	3.9	5.4	2.2	3.5	2.8	1.4	3.0

Table 64.—Comparative results of examinations of tap water made during each of the years from 1928 to 1942.

Year	Total number of samples examined	BACILLUS COLI TEST				
		100 c.c.'s -ive	100 c.c.'s +ive	50 c.c.'s +ive	10 c.c.'s +ive	1 c.c. +ive
1928	245	187 (76.3%)	10 (4.0%)	32 (13.1%)	14 (5.7%)	2 (0.8%)
1929	251	153 (60.9%)	44 (17.5%)	40 (15.9%)	9 (3.6%)	5 (2.0%)
1930	268	216 (80.6%)	15 (5.6%)	14 (5.6%)	13 (4.5%)	10 (3.7%)
1931	260	242 (93.0%)	9 (3.5%)	9 (3.5%)	— —	— —
1932	260	245 (94.2%)	3 (1.2%)	12 (4.6%)	— —	— —
1933	253	244 (96.4%)	4 (1.6%)	4 (1.6%)	1 (0.4%)	— —
1934	261	249 (95.4%)	4 (1.5%)	6 (2.3%)	2 (0.8%)	— —
1935	252	235 (93.2%)	3 (1.2%)	7 (2.8%)	5 (2%)	2 (0.8%)
1936	252	244 (96.8%)	2 (0.8%)	5 (2%)	1 (0.4%)	— —
1937	253	235 (92.9%)	11 (4.3%)	6 (2.4%)	0 —	1 (0.4%)
1938	254	251 (98.8%)	1 (0.4%)	0 —	1 (0.4%)	1 (0.4%)
1939	259	254 (98.0%)	1 (0.4%)	3 (1.2%)	1 (0.4%)	— —
1940	261	244 (92.7%)	2 (0.8%)	10 (3.8%)	5 (1.9%)	2 (0.8%)
1941	266	255 (92.1%)	10 (3.7%)	8 (3%)	1 (0.4%)	2 (0.8%)
1942	254	244 (96.1%)	3 (1.2%)	2 (0.8%)	5 (1.9%)	— —

The bacteriological results indicate that a high degree of purity was maintained during the year, indicating a corresponding degree of efficiency in the purification plant.

Table 65.—Showing average consumption of Water per Head, per Day (in gallons).

Month	1934	1935	1936	1937	1938	1939	1940	1941	1942
January ...	39.6	38.5	47.6	42.7	41.5	45.6	44.7	38.5	36.7
February ...	40.0	40.2	44.1	43.1	40.3	40.9	43.1	39.1	36.5
March ...	39.1	40.1	44.0	41.8	39.5	39.9	39.8	39.2	36.3
April ...	39.9	41.2	44.4	41.6	41.4	40.1	39.3	37.9	37.4
May ...	39.2	41.2	46.5	45.1	40.5	40.0	40.2	38.9	37.7
June ...	42.1	43.6	47.1	45.9	40.5	44.2	44.0	40.8	38.5
July ...	42.8	46.8	47.1	45.9	40.9	42.8	44.9	43.1	41.1
August ...	40.6	48.1	46.4	46.3	39.8	41.6	42.6	42.6	39.6
September ...	41.4	46.5	44.5	45.7	41.3	41.8	41.9	42.0	39.7
October ...	38.6	43.5	44.8	45.0	40.6	39.5	38.6	40.4	37.7
November ...	39.0	43.4	44.1	43.1	39.7	37.5	36.7	38.8	37.6
December ...	40.2	35.2	43.8	42.7	41.8	37.2	39.3	37.5	36.4

Section VIII.—Sanitary Department.

Table 66—Return of work performed by Sanitary Inspectors during 1942:—

District	INSPECTION OF											SERVED	
	Houses and Yards	Tenement Houses	Tenement Rooms	Infected Dwellings	Common Lodging Houses	Milk Shops	Bakeries	Work Shops	Slaughter Houses	Factories	Out-workers	Justices Orders	Notices to abate nuisance
No. 1 ...	7851	179	535	8	—	56	5	57	—	—	—	—	397
No. 2 ...	6953	2695	1270	89	24	—	4	39	2	—	—	1	312
No. 4 ...	8543	1492	6058	229	16	239	34	557	143	—	—	—	319
No. 5 ...	5029	3664	6552	56	101	—	14	32	—	—	—	3	262
No. 6 ...	5444	1746	2729	134	47	4	7	50	6	—	—	12	44
No. 7 ...	11745	956	3302	69	103	38	30	302	83	—	—	6	514
Female Inspector	—	—	—	—	—	—	305	2510	—	1211	293	—	—
Totals ...	45565	10732	20446	585	291	337	399	3547	234	1211	293	22	2248

District No. 3 is divided for purposes of supervision between Districts No. 2 and 4.
The number of inspections carried out by the Corporation Drain Tester was 3,229

Table 67.—Summary of Inspections, etc.

			No. of Inspections
Houses, yards, etc.	...	...	45,565
Tenement Houses	...	...	10,732
Tenement Rooms	...	...	20,446
Infected Dwellings	...	...	585
Common Lodging Houses	...	...	291
Bakeries	...	...	399
Workshops	...	...	3,547
Outworkers	...	...	293
Factories	...	...	1,211
Milk Shops	...	...	337
Slaughter Houses	...	...	234
Drains and W.C.'s Tested	...	...	3,229
Number of Notices to abate nuisances	...	...	2,248
Number of Justices' Orders	...	...	22
Amount of fines imposed in respect of same			£2 12 6

Table 68.—Return of Work carried out by **Veterinary Staff** during the year :—

Slaughter Houses	...	...	...	3,720
Butcher Shops	...	...	...	2,024
Tripe Houses	...	...	...	1,527
Meat Markets	...	...	...	728
Milk Shops	...	...	...	1,540
Milk Vans	...	...	...	1,640
Cowsheds	...	...	...	44
Sausage Factories	...	...	...	865
Hawkers' Stands	...	...	...	1,030
Provision Shops	...	...	...	635
Pork Shops	...	...	...	129
Fish Shops	...	...	...	122
Fruit Shops	...	...	...	147
Cold Stores	...	...	...	21
No of Prosecutions	} See Section VI., Prosecutions			
Amount of Fines imposed				

SHOPS (CONDITIONS OF EMPLOYMENT) ACT, 1938.

In the following tables are set out particulars of the work done by the Shops Inspector during the year.

Table 69.—Number of Inspections.

First Inspections	...	...	822
Subsequent Inspections	...	...	230
			<hr/>
Total	...	.....	1,052

Table 70.—Particulars of Defects Found.

Insufficient Ventilation	...	...	4
Insufficient Heating	...	...	2
No Heating Provided	...	...	2
No Seating Accommodation	...	...	—
Insufficient Sanitary Accommodation	...	...	—
No Sanitary Accommodation	...	...	6
No Accommodation for same	...	...	1
No Washing Accommodation	...	...	3
			<hr/>
Total	...	...	18

Exemption Orders served (re Sanitary Accommodation)	...	...	2
Works Notices served	...	...	...
			<hr/>

Section IX.—Housing

Houses erected and let	...	...	...	3054
Houses erected and bought out	...	...	...	81
Houses erected and still repaying mortgage	...	...	...	241
Houses in process of erection	...	...	...	Nil

Assistance to private persons and Public Utility Societies :—

(a) Under Section 6 of the Housing Acts, 1925–28...	£4,685	0	0
(b) Under the Housing Acts	...	...	£10,405 0 0

Assistance under Small Dwellings Acquisition Acts :—

(a) To houses built by Public Utility Societies	...	£103,125	0	0
(b) To houses built by Private Individuals	...	£58,347	10	0

Amount expended by Corporation on Working Class Dwellings,
£1,041,000 0s. 0d.

The following table, shows the number and rents of the various houses built by the Corporation to date :—

Location	No. of Houses	Year Built	Weekly Rents (Including Rates)
Madden's Buildings ...	76	1886	4/4 to 6/6
Ryan's „ ...	16	1888	2/4 to 5/-
Horgan's „ ...	126	1891	2/8 to 6/5
Roche's „ ...	128	1892	2/11 to 6/8
Corporation „ ...	33	1900	5/-
Sutton's „ ...	46	1905	5/9 to 6/7
Kelleher's „ ...	50	1906	5/7 to 7/5
Barrett's „ ...	89	1906	4/3 to 6/7
MacCurtain Villas ...	76	1922	11/4 to 11/10
McSwiney „ ...	40	1923	11/-
French's „ ...	30	1923	10/- and 10/6
Capwell ...	148	1928	* 8/6, 10/6 and 14/-
Turner's Cross ...	152	1930	* 8/-, 10/- and 13/-
Turner's Cross Extension ...	168	1932	11/6 and 12/6
Gurranabraher 1 ...	252	1934	† 2/6 to 8/-
„ 2 ...	25	1935	2/6 to 8/-
„ 3 ...	83	1935	8/6
„ 4 ...	78	1936	† 2/6 to 8/6
„ 5 ...	82	1936	† 3/6 to 9/6
Commons Road 1 ...	48	1936	9/6, 10/6 and 13/6
„ 2 ...	122	1936	† 3/6 to 9/6
„ 3 ...	64	1937	† 3/6 to 12/6
„ 4 ...	42	1937	10/6 and 12/6
Greenmount 1 ...	86	1936	† 3/- to 8/-
Baker's Lane 1 ...	178	1938	12/6 and 15/-
„ 2 ...	88	1938	† 3/6 to 12/6
„ 3 ...	34	1940/1	† 3/6 to 18/-
„ 4 ...	208	1940/1	† 3/6 to 18/-
Farranferris 1 ...	113	1939	† 3/6 to 18/-
„ 2 ...	93	1939	† 3/6 to 18/-
Assumption Road ...	70	1941	16/-
Greenmount 1 ...	186	1941/2	† 3/6 to 18/-
„ 2 ...	24	1941/2	† 3/6 to 18/-
Total ...	3054		*Exclusive of Rates. † Differential Rents

Following representations under the 1931 Act to the City Manager by the Medical Officer of Health, Closing or Demolition Orders were obtained on the following houses :—

Blarney Street, 128b, 174.
 Bullen's Alley, 6.
 Coley's Lane, 34.
 Commons Road, 66.
 Donoghue's Lane, 6, 7, 8.
 Glankittane Square, 1, 18, 19,
 Goulding's Terrace, 2, 12.
 Grattan Street, 20, 23.
 Greenmount Avenue, 3,
 Margaret Place, 6.

Table 71.—Showing the number of houses built since 1934 and the number of families rehoused and the effect on the population of the City:—

Location	Number of Houses	City Area		County Area	
		Families	Persons	Families	Persons
Gurranabraher ...	520	516	2923	4	22
Commons Road ...	276	10	79	266	1643
Greenmount ...	86	86	430	—	—
Baker's Lane ...	508	307	1850	201	1210
Farranferris ...	206	—	—	206	1123
Greenmount ...	210	210	1250	—	—
Assumption Road ...	70	70	300	—	—
Totals ...	1876	1199	6832	677	3998

Section X.—Port Sanitary Administration

The possible introduction of smallpox into this area via the port was our chief concern during the past year. Such a contingency is, of course, to be borne in mind everywhere during wartime and it is actually on record that shortly after the last war a man suffering from smallpox travelled all the way from London to Cobh via Dublin and Cork. He was fortunately seen at Cobh station by the late Dr. Hodges who recognised his rash, intercepted him and immediately had him transferred to Cuskinny hospital. Such an incident illustrates the increased risks of war periods. That another such incident could occur during the present contingency became more apparent than ever on the receipt (in June, 1942) of a communication from the Medical Officer of Health of Glasgow that a member of the crew of a vessel in which smallpox had occurred had travelled to this area (this man was eventually traced to Cobh and was kept under surveillance by the County Health Authorities). This was followed by official notification from the Department of Local Government and Public Health that cases of the disease had occurred in Glasgow and was followed later by an intimation that the Secretary of State for Scotland had declared the Port of Glasgow to be a district in which smallpox was prevalent in epidemic form. In the communication from the Medical Officer of Health of Glasgow (referred to above) a brief summary of the situation was given. A case of confluent smallpox had been landed at the port of Greenock on 29th May. The port of origin of the steamer was Bombay, the date of departure being 28th April. She arrived at Capetown on 8th May and left that port on 12th. The patient (who was Second Engineer of the vessel) fell ill on 20th or 21st (i.e., about nine days after leaving Capetown). His illness was apparently not diagnosed while at sea and consequently, apart from being confined to his own cabin, no special precautions were taken in regard to isolation and it was not until the vessel reached its port of destination that the true nature of his illness was discovered. Ten contacts among the passengers and crew subsequently developed the disease. One of the contacts who travelled to Swindon also developed smallpox and transmitted it to two further contacts in that locality. In Glasgow there was a spread of the infection and twenty-one residents were removed to hospital suffering from smallpox. This number was later increased to thirty-three, of which ten were imported, with three deaths.

The knowledge of these facts was of immediate concern to us on account of the regular sea-borne traffic between this port and the port of Glasgow. From what has been said it will be apparent that cases of smallpox were occurring among the civilian population in Glasgow and what was envisaged here was the possibility of some member (or members) of the crew of the Cork-Glasgow boat coming into contact with some individual in the incubation stage contracting the disease

and introducing it here. Besides there was the complement of cattlemen (some six to eight in number) who all reside locally while the boat is berthed in Cork, and who constituted the most serious danger to the community. The position at this stage was one of definite anxiety. On the 5th July I reported to the Department the steps which I had taken to deal with the contingency. Both of the local fever hospitals were crowded to capacity on account of the diphtheria epidemic and, ordinarily, could not have dealt with an outbreak of smallpox. There was an isolated block in the grounds of the North Fever Hospital which could have been pressed into service in an emergency, but at this stage it was not self-contained. (Acting on my recommendation the Committee of Management subsequently took the steps necessary to make it so.). There was no analogous block available at the District Hospital. The intercepting hospital at Cuskinny naturally came under consideration but the absence of facilities in regard to transport, fuel, lighting, staffing and commissariat appeared to make its proper administration a practical impossibility. The administrative difficulties of this hospital were greatly aggravated by the fact there is no possibility of segregating the sexes. It was built at a time when Cobh was a regular port of call for sailing ships and did not envisage the admission of any patients other than seamen so that the question of segregation did not arise. However, acting on instructions from the Department, I proceeded to investigate the possibility of putting this hospital into commission for the reception of patients and on 17th July I reported to the Department as follows :—

I visited Cuskinny hospital on the 13th inst. The hospital is now in readiness to admit up to eight patients. A number of minor structural repairs are necessary and have been put in hand. From the point of view of reception of patients, I do not anticipate any trouble but there are certain aspects of the administrative side, some of which appear insuperable.

- (a) In the event of a member of the crew of the Glasgow steamer coming ashore here in the incubation stage of the disease and going to his ordinary residence, we must anticipate cases among both sexes in the general population. It is impossible to segregate the sexes at Cuskinny hospital since there is but one ward and no means of dividing it into separate compartments. This makes it essential that additional premises be secured and since the major difficulties in connection with the use of the North Fever Hospital now seem likely to be overcome I propose to take immediate steps to prepare for the reception of patients into that institution. It must be borne in mind that the intercepting hospital was designed for the reception of seamen only, and as long as cases are confined to that category it will be adequate, but the contingency outlined above is a likely one and makes it necessary to seek additional accommodation elsewhere. The chief problem in the case of the North Fever Hospital arose from the difficulty in rendering the isolation block self-contained. This is now in the way to being solved.
- (b) Domestic Staff. So far all efforts have failed to secure the services of anyone willing to undertake these duties.
- (c) Fuel. It has been found that the turf and wood hitherto used are inadequate for raising steam in the disinfecter or for raising the temperature of the domestic water supply sufficiently. (The kitchen range is of an obsolete type, the depth of the fireplace being inadequate for the amount of turf required to heat the water). I have applied to the Department of Supplies for a permit to purchase coal to the extent of 10 tons per month.

- (d) The only form of illumination is by paraffin lamps. At present there is no paraffin oil available. I have applied for a permit to obtain a supply. This will also possibly be required for auxiliary cooking.
- (e) Medical Supervision. Owing to the impossibility of obtaining sufficient supplies of petrol for transport arrangements will have to be made to secure the services of some local physician to supervise the treatment of patients. Train arrangements are very unsatisfactory and very long delays are experienced owing to difficulties with fuel. It would be most inadvisable to rely on this form of transport.
- (f) Nursing. The difficulties in this direction have been overcome, the services of six volunteers from the staff of the Cork District Hospital having been secured. These nurses have agreed to be vaccinated and to undertake the nursing duties subject to recognition by the General Nursing Council of the time so spent as being part of their fever training and to a remuneration at the rate of £5 5s. 0d. per week.
- (g) I have instructed the Caretaker to arrange for the immediate re-vaccination of herself and husband.
- (h) I have entered into arrangements (which it is hoped to complete this evening) with the Haulbowline Ferry Service for the transport of any patients on the Glasgow boat (should such occur) from the mooring station in the town harbour to Cuskinny strand. Further transport thence will be by the hospital ambulance.

In view of the many difficulties which interpose themselves in connection with the putting of this hospital into active commission and taking into consideration the necessity for arranging for the reception of patients in at least one other institution (as outlined above) it seems to me obvious that the proper solution is to arrange for the admission of all patients to the North Fever Hospital.

It will be evident that the restrictions on transport and supplies imposed great difficulties on the proper administration and staffing of the intercepting hospital situated, as it is, over thirteen miles from Cork and two miles from the town of Cobh. Apart from the question of supervision, nursing staff and supplies our chief difficulty was to get domestic staff. Difficulty too was experienced in organising transport from ship to shore. On 25th July I reported further to the Department as follows :—

1. Commissioning of Cuskinny Hospital.

- (a) You will have noted from copies of correspondence (sent to you on 20th inst.) between the Matron of the Cork District Hospital and the Secretary of the General Nursing Council, that the latter have declined to recognise the time of the nurses as time spent in fever training and that in consequence the proposed arrangements have broken down. I have, however, received two names of further volunteers from the Matron and also an offer of service from a third nurse but these are all fully trained nurses and might not be available when required.
- (b) Domestic Staff. So far all efforts to secure the services of a cook general have been unsuccessful.
- (c) Fuel. A permit has been received to purchase two tons of coal.

2. North Fever Hospital. Since the present shortage of supplies and difficulty of transport makes the commissioning of Cuskinny hospital so difficult (if not actually impossible) and since the possibility of cases arising among both sexes in the general population makes it imperative that alternative accommodation should be secured, I have been in consultation with the Secretary, R.M.O. and Matron of this hospital and arrangements are now being made to make the isolation block here a self-contained unit. The Electricity Supply Board has agreed to provide the necessary service. The work is to be put in hand at once and when completed this block should be in a position to receive up to eight male and eight female patients (Note—while these preparations were being discussed the possibility of evacuating the hospital was under consideration. This was made possible as will be seen in the next paragraph).

3. Cork District Hospital. The likelihood of a major outbreak of smallpox is remote, but it has been deemed advisable to prepare for such a contingency. Consequently I approached the R.M.S. of this institution to ascertain in what way it could help. Dr. Gould informed me that he can clear a ward in the main building and accommodate upwards of forty patients there. Should the contingency arise it is proposed to evacuate all the ordinary cases from the North Fever Hospital and transfer them to the District Hospital in which event the former institution could accommodate upwards of a hundred cases of smallpox in addition to the sixteen already mentioned. In an emergency therefore this procedure will be adopted.

(The remainder of this report is concerned with the measures taken in connection with the crew and cattlemen on the Glasgow boat, they are dealt with separately below).

Dr. Hourihane (Local Government Inspector) visited the area on 7th August and remained until the 9th during which period the whole ground was thoroughly covered. The hospital at Cuskinny was inspected, interviews were held with the Secretary of the Board of Health (with a view to ascertaining if suitable buildings were available in the county area). The North Fever Hospital was inspected and also the District Hospital at Middleton. The conclusions reached as a result of these conferences and investigations were incorporated in a final report which I submitted to the Department and are as follows:—

Control of smallpox in the Port and City Areas of Cork.

This problem resolves itself into two divisions. The first relates to the possible introduction of the disease by sea borne traffic and the other to the possibility of the disease occurring among the civilian population either as a result of contact with seamen or through any other source.

At the present moment the former is the most likely, owing to the regular traffic between this port and the port of Glasgow. This portion again subdivides itself into two parts since, in addition to the regular crew of the vessel concerned, there are several cattlemen who travel in the vessel. As these men reside locally and remain in their homes during the vessel's stay in Cork, they may be regarded as a somewhat more likely source of infection than the seamen who remain on the vessel (but who are, nevertheless, free to come ashore here). Of the eight cattlemen, seven have already submitted to re-vaccination. The eighth persists in refusing. This man, however, has made no trip to Glasgow for over a fortnight and may therefore be regarded as no longer being a risk (unless he undertakes a further trip). Our difficulty in enforcing compulsory vaccination or detention in such cases arises from the wording of the appropriate legislative measures. These are Emergency Powers (Restriction of Passengers) Order 1941 and Emergency Powers (No. 46) Order, 1940. It hinges around the interpretation of the phrase "probable source of infection." The effective order is the latter which empowers the detention of such persons and I now understand that if representation is made to the Minister a warrant will be issued ordering detention. If this be the case our hands have been considerably strengthened and the risk of introduction of smallpox through this source should be practically eliminated.

In the case of the regular crew of the vessel, the applicable Order is the first named above, but it appeared that the crew were specifically exempted by Article 8 (e) which excludes officers and crews of ships and aircraft landing in the course of their employment. It would seem that the correct interpretation of the word "probable" now enables us to bring such persons within the scope of the E.P. (No. 46) Order and as such they will be under our control. We have made representations to this effect to the local agents of the vessels, which they have undertaken to communicate to their head office in Glasgow with a view to having vaccination undertaken by the authorities there. It is proposed now to impose definite restriction on the movements of those members of the crew who have not been recently vaccinated by confining them to the vessel while it remains in Cork. The local agents have been most helpful and have done everything in their power to facilitate us in this matter but, like ourselves, their hands have been tied by legislative restrictions and on this account they have been unable to impose conditions recommended by us. It would be much more convenient if a special Order were made to deal with this problem, as it is almost certain that further incidents of this character will recur before the termination of the war. Such Order should definitely enable the Port Sanitary Authority to impose detention on shipboard of all persons coming from an area in which smallpox is prevalent, unless they can produce evidence of recent successful vaccination. This would enable immediate action to be taken locally without reference to the Minister in the first instance and would eliminate any doubt which might remain as to the phraseology of existent legislation.

The present machinery for dealing with possible infection through this source comprises: (a) Interception by the Marine Service. All vessels entering the harbour are boarded by the officers of the service and, on the suggestion of the Port Medical Officer, it has been arranged that specific enquiry be made in regard to any case of sickness on board. The boarding officer is provided with a memorandum in which the principal symptoms of smallpox in the early stages are outlined. In the event of any suspicious or doubtful case, the vessel will be detained in the lower harbour and the Port Medical Officer will be immediately notified. (b) Issue of Pratique by the Customs Preventive Officer. It has been arranged that the Officer shall obtain from the Master of the vessel a written statement as to the health of his crew during the voyage. In the event of any doubt arising, he will at once notify the Port Medical Officer and prevent any access to, or departure from, the vessel, until the latter has decided the matter. (c) Disposal of cases arising in this manner. In the event of a case of smallpox being on board this is most likely to be first detected in the lower harbour. The Port Medical Officer will examine the patient and if the diagnosis is confirmed (or doubtful) will arrange for his transfer to Cuskinny Hospital. The machinery for such transfer is in existence and nursing staff is at present available.

NOTE—Owing to the fact that Cuskinny Hospital cannot be made to accommodate female patients (in the event of the disease occurring among the civil population) alternative accommodation has had to be sought elsewhere for such patients. The problems arising from this are dealt with lower.

Since our present problem arises from the occurrence of cases in Glasgow, the most likely source of introduction continues to be this vessel. The risk of such introduction would be enormously reduced if every member of the crew were protected by recent vaccination, hence our anxiety on this score. It is quite possible for a number of the crew to arrive here during the incubation period, to escape detection by the means outlined above, to develop the disease to such an extent as to become infectious during the vessel's stay here and, consequently, to introduce the disease to the civil population. It is possible too that the disease may be introduced through some other source (as has happened before) and it is necessary therefore to prepare for such a contingency.

The principal difficulty in dealing with such an occurrence arises from the fact (adverted to above) that segregation of the sexes cannot be arranged at Cuskinny Hospital, and on this account we have been proceeding with arrangements for reception of a number of cases in the isolation ward of the

Cork Fever Hospital. Admittedly, this is not an ideal arrangement as it is undesirable to treat smallpox cases in the midst of a large urban population. In this connection Doctor Hourihano (Local Government Inspector) and I have been examining possible alternatives and on Friday, 7th instant, accompanied by Doctor Heskin, Medical Officer, we inspected the District Hospital at Midleton, the proposal being that such an institution should be evacuated in an emergency and used for the reception of cases of smallpox. There is no doubt that this hospital lends itself admirably to this purpose and could be rapidly evacuated; but, in view of the present use of the hospital, the introduction of cases of such a disease should only be resorted to in an extreme case. It is certain that a strong prejudice would be created in the public mind against its use as a general hospital afterwards. As an alternative, we inspected the old Fever Hospital. This is an old building which has been converted into a club. It suffers from the disadvantages of all such buildings, but might be made suitable at a reasonable expenditure. As regards equipment, this could be provided at short notice from the local District Hospital. The sanitary arrangements are admittedly somewhat defective and it would be necessary to provide additional water closet accommodation and baths. The building itself lends itself to the purpose and although situated in the outskirts of the town of Midleton, its location is not as undesirable as that of the Cork Fever Hospital. If this building were used for the reception of small-pox, disinfection could be arranged with the Corporation disinfecting service and since it would be necessary to transport the patients by ambulance, the same vehicle could be used for transferring articles of clothing, etc., to the disinfecting plant.

The conversion of this building would necessarily take some little time and should a case (or cases) of smallpox arise meanwhile, the situation could be met in the following way: (a) if arising among crews of sea-going vessels—transfer to the Cuskinny Hospital; (b) among the civil population—admission to the Cork Fever Hospital. This is the only possible arrangement at the moment.

As regards contacts among the civil population, this does not present any special problem. Such persons (confined to the families of patients or other immediate contacts) could be admitted to the Corporation detention home and kept under daily supervision for the necessary period.

Owing to the impossibility of accommodating patients of both sexes at the same time at Cuskinny Hospital, the question of the advisability of retaining this hospital any longer now arises. A suitable building in a place like Midleton (readily accessible to both Cork and Cobh) would be much more desirable but it cannot be said that such a building now exists. In view of the very low maintenance charges of Cuskinny, there does not appear to be any point in recommending its closure at present, especially as it may possibly serve a useful purpose in the immediate future. The real difficulty in recommending the use of this hospital at all at the present moment arises from the administrative troubles created by shortage of supplies, rationing, transport, etc., alluded to in previous reports. These difficulties are of a very serious nature and since they have not yet been completely overcome, one cannot actually say that the hospital is completely in readiness to receive patients, but recent correspondence with the Department of Supplies would indicate that they are likely to be settled in the immediate future. This relates especially to such commodities as sugar, tea, paraffin, etc.

In view of all the aspects of this question, I deem it advisable to recommend the retention of this hospital for the present. I have always envisaged that it would be no longer necessary when the new Fever Hospital had been completed on the outskirts of Cork and that cases of small-pox arising could be dealt with there in a self-contained isolation block as remote as possible from the city end of the hospital. In view of the expense necessary to the erection of a special smallpox hospital, this has seemed to me to be a possible solution. If it is still deemed inadvisable to deal with smallpox so near a large urban population, the only alternative would appear to me to be an extension of the Cuskinny premises (so as to accommodate female patients) as a part of a permanent plan, to deal with any cases of the disease which may arise in the future.

In connection with the point raised in the last paragraph of this report as to the eventual method of disposing of smallpox cases in this area when the new fever hospital has been completed, I submitted my views to Dr. C. J. McSweeney, Medical Superintendent, Cork Street Fever Hospital, Dublin, who kindly replied to me at once. The following was his opinion :—

“I agree entirely with your proposal to make provision for a self-contained smallpox unit on the estate of the new municipal fever hospital. This is not only sound practice, but it has been current policy in Great Britain for some time. In Cardiff I treated several hundreds of smallpox cases in wooden huts less than a hundred yards away from the ordinary fever wards. When the Provisional Committee was drawing up recommendations in connection with the new fever hospital, in Dublin in 1935 we went into this question and I am enclosing herewith an extract from the report of that Committee which deals with the very point which you have now raised. You will notice that the report of the Hospital Commission is referred to in this extract, and if you will look up the report for the years 1933–34 (the first general report of the present Commission) you will find that they recommend on page 197 that a small pox unit should be included in the new fever hospital scheme. They give their reasons for this in page 191 of the same report.”

EXTRACT FROM THE REPORT OF PROVISIONAL COMMITTEE
APPOINTED IN 1935 BY THE MINISTER TO CONSIDER THE SITE,
ETC., OF NEW DUBLIN FEVER HOSPITAL.

Finally, in deciding the area of land required, the question of including on the site a self-contained smallpox unit must be considered. The Hospital Commission in their Report definitely recommend this policy, giving their reasons, and at the meetings of the Committee, the City and County Medical Officers of Health expressed themselves in favour of it. The Committee, however, thought it desirable to seek, in addition, the views of the Medical Superintendents of large Fever Hospitals in Great Britain and Northern Ireland on the specific issue of whether such provision for smallpox should or should not be made on an entirely separate site remote from the main fever hospital. The replies received from London, Edinburgh, Belfast, Liverpool, Bristol, Birmingham, Leeds and Sheffield all advocate the building of the small-pox unit on the main fever hospital site. It was learned that at Bristol :—

“The Council have decided, and the Ministry of Health have agreed, to close the present smallpox hospital (erected in another part of Bristol) and to erect a smallpox unit adjacent to the fever hospital, the new small-pox wards to be 200 yards from the fever wards, and 300 yards from the village of Pill.”

The Committee agrees therefore with the Hospital Commission that such a unit should be—

“part of the main Fever Hospital but situated at a safe distance from it.”

The Committee are aware that smallpox has been absent from this country for many years, but it is nevertheless true that the disease may arise at any time owing to extended facilities for travel and the increasing reluctance of the public to comply with the Vaccination Acts. The responsibility to receive such cases will be a function of the statutory body controlling the new Fever Hospital. The Committee appreciate that the smallpox unit, if entirely reserved for the occasional emergency would possibly remain unoccupied for years at a time. They would suggest, therefore, that this detached and self-

contained unit could most beneficially and economically be used, at all times when not required for smallpox, for the accommodation of debilitated children who have ceased to be infectious. Thus the unit would provide a preventorium to which the non-infectious lung legacies of measles and whooping cough, and the heart complications of scarlet and other fevers could be transferred from the fever wards. The fact that these children would be non-infectious, and not acutely ill, would allow of the ready evacuation of the building by discharging patients to their homes should a smallpox emergency arise. The Committee are of opinion that the interim use of the smallpox unit for this purpose would help materially to lessen the incidence of tuberculosis and heart disease in the community.

Arising out of the minutes of the Port Sanitary Authority for the month of August, I received a request from the Manager of the Cork Port Sanitary Authority to submit a considered report on the provision of adequate isolation accommodation in the vicinity. I submitted the following :—

“In my report to the Department of Local Government and Public Health, I adverted to this matter and mentioned, *inter alia*, that any action taken should envisage future development and the erection of a special block in the grounds of the new Fever Hospital for the nursing of cases of smallpox. I referred this aspect of the problem to Dr. C. J. McSweeney Medical Superintendent, Cork Street, Fever Hospital, Dublin, who is the leading authority in fever hospital administration in this country and he has verified my views that this is the proper manner of dealing with the problem. I enclose herewith copy of relevant part of his letter to me, together with the extract of the Provisional Committee referred to in it.

In view of the facts, I think the proper procedure now is to implement the proposal that the isolation ward in the North Fever Hospital should be utilized for dealing with possible cases of smallpox in the immediate future. Dr. Creedon has informed me that all that is now necessary to make the block self-contained is the installation of a water supply to the upper floor. The estimated cost of this is £23 3s. 0d., and I think the work should be put in hand.

In view of the accepted modern views on the administrative control of smallpox, I think it would be a mistake to extend the building at Cuskinny for the reception of female cases. With the completion of the new Fever Hospital, the hospital at Cuskinny will become redundant and may well be disposed of. For the time being, however, it should be maintained. The maintenance charges are very low and it would serve a useful purpose for dealing with isolated cases of the disease which might be introduced by shipping. Such cases would almost certainly be all males as there is now no passenger service to the port. The function of the Cork Fever Hospital would be to deal with cases arising among the general population.

Supervision of Crew of Glasgow Steamer.

By no means the least of our problems during this period was the supervision of the crew and cattlemen on this boat. The latter were all local residents and were consequently of more than ordinary risk. It has been noted above that cases of smallpox were occurring during this period among the civilian population in Glasgow and that both crew and cattlemen were free to mingle with the population of that city during the three days the ship was berthed there. On arrival in Cork the cattlemen proceeded to their homes and the crew were free

to come ashore whenever disposed to do so. The risk to the general population was obvious and our problem was to reduce it to a minimum. The most obvious first step was to secure the re-vaccination of both categories of seamen if this were possible. Unfortunately there is no legislation at our disposal to procure even such an elementary protection of the community and it only remained to try and obtain by persuasion what the law did not enforce. Needless to say careful supervision was exercised over the vessel on all its arrivals here during the epidemic period, in addition special efforts were made to have the cattlemen vaccinated. (We felt that the crew, being nationals of another country, did not come under our surveillance to the same extent as the cattlemen). The position was explained to them, the risk which they personally incurred by remaining unvaccinated and the risk of introducing small-pox to the community. They thereupon consented provided the Shipping Company paid their wages during any period of consequent disablement. The ship sailed that week-end without any of them having been vaccinated. These apparently trivial details are mentioned to shew the difficulties which we experienced during this period. They continued from the beginning of July up to the 18th when the men finally agreed unconditionally and all (with the exception of two, who were late) were vaccinated just before the boat sailed on that date. In the meantime communications had been addressed to the Port Medical Officers of Dublin and Waterford (intermediate ports of call) and further supervision was exercised in these places. Indeed it was felt at the time that the cumulative effect of such attention together with what the men themselves saw in the way of wholesale vaccination in Glasgow in the end prevailed upon them too to submit themselves to the process (one was actually vaccinated at Waterford).

As illustrative of the anxiety experienced at this time may be mentioned the communication received from Dr. Maughan, Medical Officer of Health, Waterford, in which he reported that on 15th July six of the cattlemen had come ashore at that port and had travelled overland by bus from Waterford to Cork. Had one of these men been in the incubation period of small-pox it is hardly possible to contemplate the consequences which might have arisen. In view of such dire possibilities it is impossible to understand the lack of legislation giving specific powers of control in such an emergency as this. It may be said that eventually all the cattlemen with the exception of one (who eventually ceased to go on the Glasgow trip) were vaccinated, but much valuable time was lost and much unnecessary risk incurred while legal opinion was being obtained as to the powers conferred by existent legislation. During all this period the regular crew were also a source of anxiety for, with the exception of two of the officers who came voluntarily for re-vaccination, we knew that none of them had been recently vaccinated and, in the absence of restrictive legislation they were free to come ashore. It will have been noted above in the final report submitted to the Department that there was considerable doubt as to the interpretation of the relevant clauses of the Emergency Powers Orders which had a bearing on the situation but that eventually the official view was that they could be made applicable. Since these matters have already been dealt with it is unnecessary to refer to them again except to stress

the view that a special Emergency Powers Order should be made dealing specifically with such a contingency as this, the general terms of which would empower the accredited agent of a Port Sanitary Authority to refuse permission to land to any passenger, sailor, etc., coming from an area in which small-pox was epidemic, unless such person can produce evidence of recent successful vaccination. Vaccination is the only certain means of communal protection against smallpox and there should be no nonsense or standing upon ceremony when one is dealing with such a major problem as the prevention of smallpox. There has grown up in the past generation in this country a flabby sentimentalism in regard to the vaccination of infants as a result of which large areas of the country and large sections of the community are now lying wide open and absolutely unprotected ready for the initiation of a major outbreak of virulent smallpox once the disease has been introduced. It was the knowledge of this fact which made the danger period last year, such a very trying one.

In conclusion it only remains to express our appreciation of the complete co-operation experienced from the various services implicated in this matter. First of all our thanks are due to the Shipping Company concerned who helped us in every possible way and kept us fully informed of what was happening in Glasgow when information was lacking otherwise, to the competent Port Authority (Lt.-Commander Crosbie) who undertook the preliminary investigation on the arrival of the boat in the portal waters and to the Harbour Commissioners for the facilities which they afforded us in regard to possible transshipment arrangements.

Constitution of the Port Sanitary Authority.

The port was constituted a port sanitary district by the Local Government Board (Ireland) on 27th April, 1903. The Authority consists of twenty members chosen by the respective riparian authorities who elect representatives to the joint board as follows:—

By the Lord Mayor, Aldermen and Councillors of the County Borough of Cork	...	...	12
By the Cork County Council	...	...	5
By the Urban District of Cobh	...	...	2
By the Urban District of Passage West	...	...	1

The South Cork Board of Public Health was dissolved by virtue of Section 36 of the County Management Act of 1940 and its powers, functions and duties transferred to and vested in the Cork County Council.

Apportionment of Expenses.

Cork County Borough contributes	...	62½ per cent. of the total
Cork County Council	...	25 ,,
Cobh Urban District Council	...	10 ,,
Passage West Urban District Council	2½	,,

Limits of Jurisdiction.

These are defined in Act 18 of the Cork Port Sanitary Order No. 3 as follows :—"The jurisdiction of the said Port Sanitary Authority shall extend to the whole of that part of the customs port of Cork that lies between Power Head and Cork Head in the County of Cork, together with the waters of the said port of Cork within such limits and all docks, basins, harbours, creeks, rivers, channels, bays and streams within the aforesaid limits and the places for the time being appointed as the customs boarding station or stations for such part of the said port and the places for the time being appointed for the mooring or anchoring of ships for such part of the said port under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf."

Issue of Deratisation and Deratisation-exemption Certificates.

By the latter dated 12th Dec., 1942, the Minister for Local Government and Public Health authorised the issue of the above certificates in pursuance of the Public Health (Deratisation of Ships) Regulations, 1930. This is, therefore, now an approved port for the issue of such certificates.

Quarantine Anchorage.

Anchorage for vessels with cases of infectious disease on board is between the town of Cobh and the Spit buoy.

Cuskinny Intercepting Hospital.

The intercepting hospital is situated about two miles east of the town of Cobh and about half-a-mile from Cuskinny Strand on the northern shore of the harbour. The hospital was built in the year 1880 by the old Cork Board of Guardians and was acquired by the Port Sanitary Authority in the year 1902 from the Commissioners of Public Works (Ireland) and since has been kept in good repair and condition. During the past year minor repair work was carried out. The function of the hospital is to deal with the more serious types of infectious disease (e.g., small pox, plague, cholera, typhus, etc.) should any such cases arrive in the port necessitating hospital treatment or isolation. Infected vessels would moor at the quarantine anchorage, the patient being removed by motor launch and landed at Cuskinny Strand or some suitable slipway and transferred to the Authorities' ambulance for transport to the hospital.

Procedure for granting Pratique.

Deepladen vessels arriving in the lower harbour and bound for Cork may be detained there for tide. Such vessels are boarded by an officer of the Customs and Excise, who puts the usual questions to the master in regard to the prevalence of illness on board and especially in relation to cholera, plague and yellow fever or as to the prevalence of same at any ports of call en route. If the answers are in the *negative*, free pratique is granted and the vessels allowed to proceed to her moorings. If any answers are in the affirmative, pratique is not granted until the vessel has been visited by the Port Medical Officer. Vessels of light draught able to proceed to the City at any state of the tide are hailed while passing Cobh and if the answers are satisfactory are allowed to

proceed to Cork where they are boarded by the Customs Officer and the usual questions are put. In addition, instructions have been sent to all shipping agents for companies using the port of Cork that masters of vessels approaching the port with cases of infectious disease on board are to notify the Authority by wireless.

Measures against Rodents.

All vessels from foreign ports are boarded immediately on arrival by the Port Sanitary Officer who, after satisfying himself as the documents relative to health and deratisation certificates proceeds to the examination of the vessel in regard to rat infestation, particular attention being paid to cargo surfaces as soon as the holds have been opened up. The various cargo compartments are searched for sick or dead rats, which, if found, are submitted at once for bacteriological examination. So far a positive result has not been obtained, but such a result would necessitate suspension of discharge of cargo. In addition, traps are laid in various parts of the ship and rats caught are submitted to examination. Precautions adopted to prevent migration of rodents ashore, comprise the placing of rat guards on all mooring ropes and wires of all except cross-channel vessels. In addition, grain boats from the Argentine have to keep their gangways lime-washed daily and well lighted at night whilst alongside the quays.

The following measures would be adopted in this port in the event of a vessel being found effected with human or rodent plague to prevent egress from ship to shore :—

- (1) Vessel would be breasted off at least six feet from the quayside by placing wood floats between it and the quay wall.
- (2) Besides the adjusting of rat guards, moorings would be parcelled with old canvas on shore side of rat guards and same smeared with Stockholm tar.
- (3) Gangway would be required to be lifted from sunset to sunrise.
- (4) Intensive trapping and examination of rodents caught in the immediate neighbourhood of the ship's berth.

Of all diseases liable to be introduced by shipping, *plague* is without doubt the most to be feared, hence the necessity for the stringent precautions in regard to its prevention. Several of the ports from which shipping arrives in Cork are situated in countries in which plague is endemic, even though the ports themselves may not actually be infected at the time of departure. There is, however, the ever present danger of the importation of *plague infected rats* from such ports and it is in consequence of this danger that so much importance is attached to the systematic trapping and examination of rats taken on vessels coming into this port. As there is always a certain amount of migration of rats from ships to the shore while vessels are tied up at their moorings it is also necessary to maintain a constant sampling and examination of the shore rats taken in warehouses adjacent to the quays. It will be noted from the appropriate tables that of 43 rats taken during the past year, 20 were submitted to post-mortem examination and that all gave negative results. In the previous year 119 were trapped, of which 28 were examined, also with negative results. The rats are examined

in the first instance by the Inspector, under the supervision of the Chief Veterinary Officer. In the event of a suspicious finding, the carcase would be referred to the Bacteriological Department of University College for a further examination.

The fact that so many rats have been examined and found negative is not by any means an indication for relaxation in the measures which have been adopted in connection with their reduction and the prevention of plague. One infected rat coming ashore might be the cause of an outbreak among the shore population and from time to time we are reminded of this ever present danger by the discovery of plague infected rats in other ports. Plague is rarely transferred from one human being to the other, such transfer requires an intermediary and the agent is almost always the rat flea. It is only when an epizootic breaks out among the rats and large numbers die that the infecting flea seeks a new host and may transfer his attention to human beings. In countries where the disease is endemic, outbreaks among human beings are always heralded by excessive mortality among rats. Excessive rat mortality on board ship is a very suspicious sign of plague infection and masters are bound to notify any such happening at the port of arrival. Plague is such a deadly disease that no relaxation in preventive measures can be tolerated and for this reason it is necessary to keep up a constant watch over vessels arriving from foreign parts and for systematic examination and extermination of rats.

Water Supply.

Drinking and boiler water is obtained directly from the public supply. There are upwards of 80 such hydrants available in this port. As mentioned in the section dealing specifically with the supply to the City, the water is subjected to systematic sampling and bacteriological examination throughout the year. 254 samples were examined during the year and the results indicated that the water was of first-class quality.

Sanitation of Coasting Vessels.

I am able to report a definite improvement in the sanitary arrangements on board the majority of the vessels using this port. This improvement is, in my opinion, entirely due to the assiduity of your officer, Mr. Kieran, in following the cases of defects which have come to his notice. Notwithstanding the relaxation which has had to be admitted as a consequence of hostilities, it is satisfactory to note that a very fair standard of cleanliness has been maintained on board the majority of the vessels. A large number of coasters are now being pressed into service which had not previously visited this port and an effort is being made to ensure that reasonable standards are maintained on these also.

Measures against Rodents Ashore.

During the year intensified measures against rodents in the mills and stores abutting the quays have resulted in further minimising the danger of the introduction of rodent plague into the port. The majority of the premises around the port have signed yearly contracts with a Dublin firm, who specialise in the destruction of rodents, whilst those who have no such contract, themselves, lay down poison from time to time. The effects of this poisoning campaign cannot be determined in numbers, but if 25 per cent. of the treatments are effective, it will

prevent a recurrence of the heavy rodent infestation discovered around the quays in 1937. The contract with these specialists in rodent destruction calls for a poison treatment of the stores and mills every three weeks, and in the event of reinvasions, further baits are laid down between the periodical treatments. Trapping for specimen rodents is routine, and the same procedure for the bacteriological examination is still in operation namely: a preliminary examination by the Port Medical Officer or the Chief Veterinary Officer, and if found necessary a further examination of the specimen by the bacteriological department of the University College, Cork.

During the year 23 rodents have been trapped ashore and 10 post mortem examinations held, all of which proved negative.

Rat Proofing Ashore.

It must be realised that the proofing of some of the old premises abutting the quays has not proved very successful in one or two cases on account of the apparent honeycombed condition of the limestone supporting walls which are from three to four feet in thickness and the ease with which these pests can burrow through these walls when the old runs have been cement proofed. The hollow sound of some of the old stone flagged floors give rise to the belief that the soft ground beneath must be similarly burrowed, and it appears in one instance that runs underneath the floors extend inwards for a distance of at least 60 feet before breaking the surface through soft ground at the rear. With such conditions prevailing, rat proofing would have to be undertaken on a large scale, and it is even doubtful then, whether these premises would be efficiently proofed on account of their structure.

Badly fitting doors, unprotected skylights, etc., contribute in a minor degree to the continual infestation of this type of premises, but the huge quantities of grain in sacks lying for long periods are the main attraction for rodents, as they provide for these pests nesting places which are very difficult to detect, for the rodent, ever suspicious, builds breeding places as high as five sacks high from the ground and as far into the centre as it is possible to get. As it is impossible therefore to spread bait close around this breeding area, the only means left is to surround these large sacks of grain with poison baits and to try and drop as many as possible from the top through the tiers of sacks towards the centre, and to abundantly distribute baits around the sources of their water supply. A few excellent methods of rat proofing stores intended for the storage of sacks have been noticed, these consist of a wired-in cage arrangement with either one or two doors, but unfortunately the most important point in preventing rodents gaining access to the roofs for water have been overlooked when building this framework and consequently its effectiveness has been considerably reduced, doors not being fitted with self closing springs remain open during the working day and stray rodents find no difficulty in gaining admittance. The defects in these structures have been pointed out to the charge hands from time to time, but I regret to say no serious effort has been made to have them remedied. Mill managers and managers of grain stores have been satisfied with the results of the poisoning campaign as it has saved them money and at the same time lightened the burdens of those who administer Public Health in the Port Sanitary area.

Table 72.—Return of Shipping entering the Port since 1928.

Year	Number of Arrivals			Tonnage		
	Foreign	Coastwise	Totals	Foreign	Coastwise	Totals
1928	442	1,492	1,934	261,612	488,158	749,770
1929	260	1,567	1,827	283,759	525,231	808,990
1930	297	1,636	1,933	364,650	617,783	982,433
1931	272	1,566	1,838	345,430	647,327	992,757
1932	315	1,375	1,690	352,459	602,509	954,968
1933	399	893	1,292	371,757	462,047	833,804
1934	404	817	1,221	407,188	463,169	870,357
1935	285	1,015	1,300	323,631	525,062	848,693
1936	249	1,053	1,302	277,779	583,922	861,701
1937	250	1,098	1,348	300,730	594,396	895,126
1938	239	1,084	1,323	280,403	598,114	878,517
1939	202	1,074	1,276	274,660	521,801	796,461
1940	116	1,053	1,169	174,087	373,841	547,928
1941	—	522	522	Nil	203,976	203,976
1942	Figures not available.					

Table 73.—Summary of Inspections and Defects.

Description	Number of Arrivals	Tonnage of Arrivals	Number Inspected	Number Defective	No. of Defects Remedied
<i>Foreign</i> Steamers	Figures not available		11	11	11
<i>Coastwise</i> Motor	Figures not available		369	126	113
Total	Figures not available		380	137	124

Table 74.—Return of Vessels entering the Port which were dealt with by the Department each month during 1942.

Month	Foreign	Coastwise	Total
January ...	—	28	28
February ...	—	26	26
March ...	1	31	32
April ...	1	27	28
May ...	1	32	33
June ...	1	41	42
July ...	1	35	36
August ...	1	34	35
September ...	—	36	36
October ...	4	34	38
November ...	1	25	26
December ...	—	20	20
Totals ...	11	369	380

Table 75.—Return of Imports and Exports, 1929/42.

Year	Imports (tons)	Exports (tons)
1929	815,347	86,246
1930	906,340	120,610
1931	861,782	85,704
1932	890,377	104,884
1933	710,149	89,319
1934	784,174	66,606
1935	743,939	63,219
1936	788,545	73,673
1937	829,704	78,530
1938	802,238	65,147
1939	900,644	105,659
1940	734,888	74,517
1941	262,222	37,448
1942	Figures not available	

Table 76.—Sanitary defects and nuisances dealt with during 1942.

Dirty Focsles	...	...	...	...	94
Dirty Store Rooms	...	...	...	...	3
Damp Quarters	...	...	...	...	5
Damp Quarters due to Sweating	...	...	...	...	3
Leaky Deckheads	...	...	...	...	9
Defective Port Frames and Discs	...	...	...	...	25
Defective Flooring Boards and Decks	...	...	...	...	2
Defective Hawse Pipes	...	...	...	...	5
Smoke Nuisance in Accommodation	...	...	...	...	2
Defective W. C. Fittings	...	...	...	...	13
Defective Bogie Stoves, Galley Stoves and Funnels	...	...	...	...	10
Defective Wash Basins	...	...	...	...	2
Defective Soil Pipes	...	...	...	...	3
Defective Doors	...	...	...	...	1
Defective Shellplating in Focsles	...	...	...	...	2
Defective Steam Heaters	...	...	...	...	2
Total				...	181
Verbal Notices Given	...	...	...	...	100
Memos. left on Board	...	...	...	...	38
Statutory Notices Served	...	...	...	...	1
Letters to Owners	...	...	...	...	2
Total				...	141

A total of 983 inspections of vessels was carried out during the year.

TABLE 77—RATS TRAPPED ASHORE.

Month	No.	Mus Decumans	Mus Alexandrinus	Mus Rattus	Species Unknown	No. of P.M. Exam.*
Jan. ...	2	2	—	—	—	—
Feb. ...	1	1	—	—	—	1
March ...	3	3	—	—	—	—
April ...	2	2	—	—	—	—
May ...	—	—	—	—	—	—
June ...	4	3	1	—	—	3
July ...	5	4	1	—	—	3
August ...	5	4	1	—	—	2
Sept. ...	—	—	—	—	—	—
Oct. ...	—	—	—	—	—	—
Nov. ...	1	1	—	—	—	1
Dec. ...	—	—	—	—	—	—
Total ...	23	20	3	—	—	10

* All P.M. Examinations proved Negative.

TABLE 78—RATS TRAPPED ON VESSELS

Month	No.	Mus Decumans	Mus Alexandrinus	Mus Rattus	Species Unknown	No. of P.M. Exam*
January	—	—	—	—	—	—
Feb. ...	—	—	—	—	—	—
March	8	3	4	—	1	3
April	—	—	—	—	—	—
May ...	6	—	6	3	—	3
June ...	3	—	—	—	—	2
July ...	—	—	—	—	—	—
August	—	—	—	—	—	—
Sept. ...	—	—	—	—	—	—
October	—	—	—	—	—	—
Nov. ...	3	—	—	3	—	2
Dec. ...	—	—	—	—	—	—
Totals	20	3	10	6	1	10

* All P.M. Examinations proved negative.

Section XI—Meteorology.

I am indebted to Prof. H. N. Walsh, University College, for the following particulars concerning the weather conditions during the year, and more especially for the trouble which he has gone to to bring up to date the Tables which follow.

Table 79.—Rain fall in inches for each quarter and for each year, 1901–1942.

Year	I.	II.	III.	IV.	Total
1901	10.07	7.62	10.75	10.12	38.56
1902	9.29	7.80	7.31	12.88	37.28
1903	16.89	8.80	14.95	12.13	52.77
1904	13.63	5.71	10.41	7.47	37.22
1905	11.70	6.59	9.82	9.14	37.25
1906	9.46	5.76	5.58	9.03	29.83
1907	4.06	10.10	7.40	16.02	37.58
1908	7.67	5.28	10.16	9.53	32.64
1909	7.61	9.94	2.62	9.74	29.91
1910	10.70	7.24	8.64	11.98	38.56
1911	5.94	6.89	7.87	18.47	39.17
1912	13.46	7.07	9.30	7.05	36.88
1913	13.92	10.32	7.73	12.49	44.46
1914	13.72	3.60	9.85	15.20	42.42
1915	11.62	6.27	9.26	15.68	42.83
1916	8.68	9.19	7.37	21.11	46.35
1917	8.75	6.93	9.40	7.25	32.33
1918	14.75	5.59	13.37	13.73	47.44
1919	10.78	7.11	6.77	6.97	31.63
1920	11.75	14.12	8.90	13.24	48.01
1921	8.04	2.22	8.71	9.90	28.87
1922	13.08	5.45	10.57	8.15	37.25
1923	14.41	5.38	10.71	10.54	41.04
1924	12.32	9.76	11.82	17.66	51.56
1925	10.31	10.49	8.43	11.92	41.15
1926	15.42	8.19	4.68	9.55	37.84
1927	12.20	6.16	11.45	16.06	45.87
1928	16.14	13.86	8.31	17.35	55.66
1929	11.28	6.72	7.27	20.91	46.18
1930	14.98	5.91	12.67	14.35	47.91
1931	12.30	10.35	8.34	13.27	44.26
1932	8.54	8.11	7.31	13.62	37.58
1933	8.61	8.74	5.22	6.47	29.04
1934	9.66	7.13	11.49	13.75	42.03
1935	5.33	9.33	9.98	10.97	35.61
1936	16.77	4.51	9.13	9.88	40.29
1937	19.67	6.12	7.90	8.52	42.21
1938	9.22	7.38	7.99	15.14	39.73
1939	13.01	4.94	7.43	16.53	41.91
1940	14.74	6.64	3.80	17.96	43.14
1941	12.82	5.47	5.73	14.40	38.42
1942	11.39	8.43	8.21	8.17	36.20

The mean temp. for 1942 was 50.2° F. The warmest day was June 5th with a maximum shade temp. of 79° F. The warmest nights were July 21st and August 7th with a minimum shade temp. of 61° F. The coldest nights were February 24th and November 23rd with a minimum shade temp. of 23° F.

Table 80—Temperature at Cork (in the Shade) for 58 years ending 1942.

115b

YEAR	January			February			March			April			May			June			July			August			September			October			November			December			Mean Temper- ature of Year
	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	
	Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			
1884	55-31-45.5			54-31-46.5			54-30-45.5			57-34-48.5			68-37-55.5			73-40-59.0			72-45-61.5			74-44-62.2			71-45-58.5			60-34-52.2			60-28-45.2			55-28-41.3			51.8
1885	54-27-41.7			50-27-43.5			54-30-43.5			62-30-48.2			61-34-52.0			73-42-59.2			80-43-62.0			74-46-60.5			65-36-55.2			57-35-46.7			58-31-46.7			54-25-39.5			49.9
1886	52-23-38.0			52-28-41.5			57-25-41.5			65-32-46.7			65-33-50.5			76-45-57.7			79-44-59.5			76-45-60.5			65-39-56.5			64-37-51.5			58-29-45.0			50-22-39.0			49.0
1887	54-30-43.0			54-27-43.5			58-25-42.0			62-26-44.5			70-35-52.5			81-47-62.5			80-47-64.2			76-42-60.7			69-39-55.0			61-28-48.2			54-24-42.0			55-25-39.7			50.0
1888	54-26-43.0			52-26-38.2			56-26-40.7			59-28-46.5			68-39-53.2			73-39-57.0			70-40-57.5			74-42-60.0			66-37-55.5			63-31-50.5			58-27-48.0			56-28-44.7			49.6
1889	58-26-43.0			57-27-42.2			59-29-44.7			58-32-46.7			68-40-48.0			77-46-58.0			77-45-60.0			72-43-58.7			70-38-57.2			59-32-48.2			60-29-48.2			56-29-44.2			49.9
1890	55-29-44.0			54-29-42.5			58-28-45.2			61-29-48.0			70-39-53.0			73-45-58.0			72-43-58.4			72-40-58.4			75-42-50.2			66-34-53.0			60-24-44.6			52-25-39.0			50.3
1891	53-23-40.3			56-31-45.7			61-22-42.1			60-31-46.9			73-34-50.0			78-40-58.6			75-44-59.0			73-40-58.0			71-39-56.5			61-29-48.5			53-28-42.6			55-26-44.0			49.4
1892	55-20-39.2			55-25-42.3			57-24-40.0			62-27-47.2			66-37-53.1			73-39-56.2			73-44-59.0			70-44-60.0			68-37-55.0			56-28-45.0			56-31-47.2			53-27-42.7			49.7
1893	53-21-40.5			53-24-42.5			60-34-47.5			67-31-51.5			69-43-56.5			80-46-59.8			74-46-61.2			77-45-61.7			71-33-55.2			63-31-49.0			59-30-43.0			53-26-42.5			50.9
1894	53-11-39.5			56-28-44.6			57-33-44.8			62-37-49.0			67-34-50.0			71-38-57.0			72-45-69.0			71-44-57.5			66-36-53.5			66-33-49.5			59-28-46.0			54-29-44.5			49.6
1895	47-23-36.5			48-22-34.5			63-27-44.0			61-31-48.2			70-33-53.0			74-40-58.7			70-44-58.7			70-43-59.0			71-46-58.9			62-28-46.0			56-30-45.0			54-26-42.5			48.7
1896	53-26-43.0			55-32-45.2			56-31-46.5			65-34-50.0			74-33-56.2			82-47-60.5			75-42-60.0			73-41-57.5			68-41-55.0			65-30-43.2			53-29-42.0			53-23-40.0			49.9
1897	50-22-37.5			56-32-46.0			55-31-44.0			58-29-46.0			70-35-51.0			75-41-59.0			77-43-61.0			80-45-59.5			67-38-53.2			61-37-52.2			58-32-47.2			53-29-44.0			50.1
1898	55-32-45.8			54-26-41.5			58-28-41.0			60-31-47.7			67-34-51.0			74-39-56.8			78-44-59.5			73-46-69.5			72-40-58.7			64-34-51.3			59-30-44.0			55-27-45.4			50.3
1899	53-26-40.1			52-29-43.0			64-22-43.0			63-29-46.6			65-34-50.6			78-41-59.5			76-45-60.0			76-46-62.3			71-31-54.1			60-29-47.9			55-39-47.2			51-24-40.0			49.5
1900	54-27-39.5			52-14-35.4			51-25-38.6			65-33-47.8			68-36-50.7			75-42-56.8			75-45-60.1			71-42-57.0			67-38-55.1			63-32-48.1			57-29-41.7			52-26-42.3			47.9
1901	49-24-37.8			49-22-35.8			51-34-38.9			59-39-45.0			68-34-51.9			72-37-54.2			76-46-60.2			75-41-57.5			67-39-54.0			61-31-47.0			54-19-41.2			51-26-37.5			46.8
1902	50-25-40.6			52-19-36.6			57-30-44.0			57-29-44.0			67-31-47.3			74-38-53.1			74-40-56.0			68-40-56.2			68-36-53.6			62-34-57.4			55-30-43.5			52-25-39.0			46.8
1903	50-22-39.5			52-29-42.7			52-29-41.1			57-27-43.7			69-36-50.4			70-35-54.0			74-43-56.6			68-40-54.3			64-36-52.4			60-28-46.2			55-24-41.0			48-22-37.0			46.4
1904	49-27-38.5			49-24-37.2			52-25-39.1			60-32-44.4			65-32-48.6			69-49-54.2			73-40-57.3			69-41-56.4			63-38-52.5			63-35-50.2			57-25-43.5			52-28-43.0			47.4
1905	51-29-42.0			55-23-41.6			53-30-42.6			58-33-46.4			68-36-52.6			75-42-58.0			76-45-60.0			70-42-55.5			68-39-53.6			62-26-45.0			52-23-39.0			50-30-43.3			48.3
1906	50-28-41.1			47-25-38.0			58-30-42.6			59-29-44.3			64-33-49.7			75-42-57.8			74-44-59.0			73-44-59.8			71-40-55.0			63-29-49.0			55-29-44.0			53-24-39.0			48.4
1907	49-18-39.6			52-25-38.4			57-32-45.8			64-30-45.4			65-35-48.7			69-49-53.5			78-41-58.6			68-43-57.0			68-38-57.0			60-28-45.9			52-29-49.8			49-27-39.5			47.5
1908	52-23-38.5			53-31-43.0			52-29-40.4			56-26-43.4			68-37-52.0			71-40-55.7			80-46-59.5			74-44-58.2			67-38-53.5			64-33-53.0			56-28-45.7			51-30-41.1			49.0
1909	51-28-40.3			52-22-39.6			56-23-40.6			61-31-46.8			66-33-51.0			69-41-54.0			71-45-58.6			79-43-59.7			65-37-52.3			64-26-49.0			55-20-38.2			50-24-38.3			47.4
1910	50-25-38.5			53-27-39.0			55-30-41.0			60-29-43.9			68-34-51.4			66-44-55.5			70-45-57.5			69-46-57.0			68-37-54.5			62-34-49.0			53-24-39.0			50-28-41.5			47.3
1911	50-27-39.2			53-22-39.7			56-29-40.3			59-27-40.9			70-37-52.2			72-45-56.7			79-44-61.0			73-45-60.2			73-39-54.3			57-31-48.0			53-26-39.9			49-27-39.3			48.0
1912	50-27-40.8			50-32-40.0			57-32-41.8			61-32-47.0			63-36-51.2			66-32-52.9			74-44-55.7			61-36-51.3			68-36-53.5			61-31-50.1			59-33-49.2			54-30-44.3			48.1
1913	52-27-40.6			54-32-43.6			55-34-45.0			59-29-44.7			64-36-49.5			75-38-54.0			74-47-55.9			74-40-58.8			72-44-57.6			61-32-51.5			60-34-48.9			56-33-45.6			49.6
1914	54-43-48.5			55-50-53.0			55-50-52.4			60-53-56.9			62-55-58.2			70-59-64.4			69-53-64.8			67-63-64.6			66-60-62.6			62-55-58.4			58-50-53.4			53-46-50.0			47.2
1915	50-37-43.5			45-25-35.0			58-35-46.5			50-35-42.5			62-40-51.0			64-40-52.0			62-42-52.0			65-43-54.0			62-40-51.0			55-37-46.0			48-28-38.0			40-28-34.0			44.9
1916	50-36-43.3			47-30-39.1			45-30-37.8			49-36-42.6			60-34-47.4			55-40-47.8			66-40-53.4			65-49-57.7			60-40-50.0			56-36-46.4			47-32-40.4			40-24-32.5			44.8
1917	52-22-36.0			50-24-35.0			52-23-39.25			59-30-41.5			70-32-50.25			66-40-52.25			68-40-55.4			70-46-56.12			66-26-51.25			56-36-40.8			58-30-44.5			56-26-38.4			45.7
1918	50-22-36.0			54-32-43.0			56-26-41.0			64-32-48.0			67-33-50.0			76-36-56.0			76-40-58.0			74-40-57.0			64-36-50.0			62-30-46.0			54-26-40.0			54-26-40.0			47.0
1919	54-24-36.0			50-26-39.0			50-24-37.8			56-30-43.2			72-34-51.2			68-36-51.0			74-40-56.0			80-40-57.5			64-34-49.7			62-36-44.6			56-14-34.5			54-28-41.0			46.0
1920	52-30-40.0			50-30-39.8			50-30-41.3			56-36-46.3			66-28-46.3			68-34-53.7			66-42-53.5			66-40-53.2			68-32-51.2			60-36-48.5			56-24-41.6			50-20-36.0			45.9
1921	60-25-44.7			50-24-36.2			50-24-37.5			58-26-41.5			70-34-48.4			76-32-55.0			80-40-60.0			74-38-54.2			64-32-48.2			62-28-47.4			66-20-39.7			50-28-41.2			46.2
1922	56-20-49.1																																				

SUNSHINE.

Table 82.—The total amount of *bright sunshine* each year from 1930 to the present year.

	Hours		Hours
1930	... 1,478.1	1937	... 1,259.4
1931	... 1,313.8	1938	... 1,350.9
1932	... 1,282.5	1939	... 1,393.1
1933	... 1,465.8	1940	... 1,493.9
1934	... 1,430.1	1941	... 1,246.5
1935	... 1,442.0	1942	... 1,482.5
1936	... 1,357.5		

Table 83.—*Mean Temperature* (°F.) for each quarter and for each year from 1901 to 1940, inclusive.

Year	I.	II.	III.	IV.	For whole year
	°	°	°	°	°
1901	37.5	50.4	57.2	41.9	46.8
1902	40.4	48.1	55.3	43.3	46.5
1903	41.1	49.4	54.4	41.4	46.6
1904	38.3	49.1	55.4	45.6	47.1
1905	42.1	52.4	56.9	42.4	48.4
1906	40.6	50.6	57.9	44.0	48.3
1907	41.3	49.1	57.5	42.1	47.5
1908	40.6	50.4	57.0	46.6	48.6
1909	40.2	50.6	56.9	41.8	47.5
1910	39.5	50.3	56.3	43.2	47.4
1911	39.7	51.3	58.5	42.4	47.5
1912	40.9	50.4	53.5	47.9	48.2
1913	43.0	49.4	57.4	48.7	49.6
1914	40.3	51.4	56.7	43.5	48.1
1915	38.3	49.2	52.7	39.2	44.9
1916	40.0	45.9	53.7	39.7	44.8
1917	36.7	48.1	54.2	43.9	45.7
1918	40.0	51.3	55.0	42.0	47.0
1919	37.6	48.5	54.4	40.0	45.5
1920	40.3	48.9	52.6	42.0	45.9
1921	39.6	48.3	54.3	42.7	46.2
1922	40.2	49.9	57.8	46.4	48.6
1923	44.0	50.7	58.4	43.8	49.2
1924	42.6	51.4	56.7	47.6	49.6
1925	43.3	51.8	57.9	44.5	49.4
1926	45.1	52.1	61.1	44.0	50.6
1927	44.1	52.2	58.5	45.5	50.1
1928	44.7	52.0	58.0	46.4	50.3
1929	43.2	52.3	59.4	45.7	50.1
1930	40.7	52.9	57.8	46.5	49.5
1931	42.3	53.1	58.2	46.7	50.1
1932	43.2	52.1	59.7	46.4	50.4
1933	42.3	54.5	62.1	44.9	51.0
1934	42.4	52.8	59.8	47.6	50.6
1935	44.1	52.7	59.4	44.2	50.1
1936	42.8	52.6	59.9	47.1	50.5
1937	42.6	53.8	59.2	44.9	50.1
1938	45.3	52.3	58.4	46.6	50.6
1939	44.6	53.9	59.8	45.9	51.0
1940	43.2	55.6	58.9	45.4	50.8
1941	40.4	51.8	60.0	47.5	49.9
1942	42.6	53.4	59.6	45.5	50.2

BAROMETER.

The mean reading for 1942 was 29.96 inches ; the highest was 30.70 inches on the 2nd December. The lowest was 28.39 inches on the 16th December. (Observations made at 9 am., G.M.T. only).

Appendix I.

OPERATION OF THE SCHEME FOR THE TREATMENT OF VENEREAL DISEASES.

Record of Work Done in the D.V. Treatment Centre.

	Cork City		Cork County		Other Districts		Total		Totald Male and Female Cases
	M.	F.	M.	F.	M.	F.	M.	F.	
<i>New Cases (1st time) —</i>									
Syphilis ...	29	14	3	6	2	—	34	20	54
Soft Chancre ...	2	—	1	—	1	—	4	—	4
Gonorrhoea ...	35	17	6	5	—	—	41	22	63
Not V.D. ...	41	5	19	1	1	—	61	6	67
Total ...	107	36	29	12	4	—	140	48	188
<i>Total Attendances :—</i>									
Syphilis ...	669	185	138	31	5	10	812	226	1038
Soft Chancre ...	6	—	7	—	7	—	20	—	20
Gonorrhoea ...	447	241	81	69	—	3	528	313	841
Not V.D. ...	62	5	27	2	2	—	91	7	98
Total ...	1184	431	253	102	14	13	1451	546	1997
<i>Cured :—</i>									
Syphilis ...	4	—	1	—	—	—	5	—	5
Soft Chancre ...	2	—	1	—	1	—	4	—	4
Gonorrhoea ...	31	11	2	2	—	—	33	13	46
Not V.D. ...	—	—	—	—	—	—	—	—	—
Total ...	37	11	4	2	1	—	42	13	55
<i>Pathological Exams :—</i>									
Wassermanns ...	77	15	20	5	2	—	99	20	119
Gonococci ...	72	16	15	2	—	—	87	18	105
Kahn ...	77	15	20	5	2	—	99	20	119
Total ...	226	46	55	12	4	—	285	58	343
<i>Therapy :—</i>									
Stabilarsan or other Arsenicals ...	364	147	62	13	5	1	431	161	592
Bismuth Preparations ...	277	8	70	—	1	—	348	8	356
Irrigations ...	53	—	13	—	—	—	66	—	66
Douches ...	—	10	—	2	—	—	—	12	12
Mercury and Iodides ...	22	—	4	—	—	—	26	—	26
Vaccines, M. & B. 693 ...	380	206	66	49	—	—	446	255	701
Total ...	1096	371	215	64	6	1	1317	436	1753

There was a pronounced increase in the attendances during the past year as compared with previous years. This increase became apparent towards the middle of the year and is reflected in the following tables. These figures probably indicate an increased prevalence of these conditions among the community and are very disquieting.

Table 82.—Record of new cases treated annually at Centre.

Period	Syphilis	Soft Chancre	Gonorrhoea	Not V.D.	Total
1937	29	2	34	30	95
1938	29	—	42	34	105
1939	37	1	27	42	107
1940	34	8	30	46	118
1941	25	6	42	68	141
1942	54	4	63	67	188

Table 83.—Record of new cases treated during 1942 (non V.D. Cases not included).

Period	Males	Females	Total
Jan.	1	4	5
Feb.	5	2	7
Mar.	2	4	6
Apr.	5	4	9
May	2	2	4
June	2	1	3
July	16	2	18
Aug.	7	2	9
Sept.	11	4	15
Oct.	9	6	15
Nov.	10	4	14
Dec.	9	7	16
Totals	79	42	121

Table 84.—Monthly attendances at V.D. Centre, 1942.

Period	Males	Females	Total
Jan.	70	44	114
Feb.	83	58	141
Mar.	79	55	134
Apr.	76	58	134
May	84	44	128
June	84	37	121
July	133	22	155
Aug.	122	26	148
Sept.	160	31	191
Oct.	172	30	205
Nov.	176	73	249
Dec.	212	68	280
Totals	1451	546	1997

Appendix II.

OPERATION OF THE COUNTY BOROUGH SCHEME FOR THE WELFARE OF THE BLIND.

The following are the terms of the Scheme drafted for this purpose and now in operation within the Borough :—

In this scheme the term “ Blind Person ” shall mean any inhabitant of the County Borough who is so blind as to be either unable to perform any work for which eyesight is essential, or unable to continue his or her ordinary occupation ; the term “ The Corporation ” shall mean the Lord Mayor, Aldermen and Burgesses of the County Borough of Cork, acting by the City Manager ; the term “ The Minister ” shall mean the Minister for Local Government and Public Health.

2. The Corporation will establish and maintain a Register in which shall be entered the name and address, age, sex, religion and other necessary particulars of every blind person who shall produce a certificate from a recognised Ophthalmic Surgeon that the acuity of vision of such person (refractive error being corrected) is below 1/20th normal (3/60th Snellen), or that such person is so blind as to be unable to continue his or her ordinary occupation. Any person between the ages of 30 and 70 may, however, be registered without producing such certificate on furnishing evidence of being in receipt of a pension in pursuance of Section 6 of the Old Age Pensions Act, 1932. The Register shall be kept written up-to-date, and shall be revised annually in the month of January. The Corporation shall be empowered to pay reasonable fees to Ophthalmic Surgeons for certifying in cases of necessitous persons.

3. Arrangements will be made by the Corporation with the Authorities of one or more of the Institutions for the Blind mentioned in the Schedule hereto on such terms as may be approved by the Minister for the following purposes :—

- (a) the education or industrial training of suitable blind persons between the ages of five years and thirty years ;
- (b) the employment in workshops for the Blind of blind persons suitable for such employment, their maintenance in a Hostel, and the augmentation of their wages ;
- (c) the maintenance in Homes of blind persons who, owing to age or infirmity, are incapable of work.

4. The Corporation may in cases of unemployed and necessitous blind persons ineligible for education or industrial training under Article 3 (a) of this Scheme and living in their own homes or in lodgings, grant assistance to such persons in accordance with the following scale :—

Classification of Blind Persons	Amount of weekly allowance
(a) Blind person over 15 years and under 30 years of age	12s. 6d.
(b) Blind person 30 years of age and upwards	... 6s. 0d. (with pension)
(c) Married man under 30 years of age with wife dependent on him ... ..	... 19s. 0d.
(d) Married man 30 years of age and upwards with wife dependent on him ... ..	... 12s. 0d. (with pension)
(e) Additional allowance for each child ... ..	... 2s. 6d.

In considering the grant of allowances on this scale to the classes of blind persons at (a) and (c) above, the Corporation will not take into account casual earnings of any such person where they are satisfied that such earnings do not exceed six shillings per week.

5. Nothing in this Scheme is to be construed as giving blind persons irrespective of their means or conduct, a right absolute to assistance. The Corporation will not grant an allowance under Article 4 above to any blind person under 30 years of age who is capable of instruction and who declines without a satisfactory reason to take advantage of the facilities for education, training or employment under the Scheme, or who is by conduct or otherwise deemed unsuitable for assistance. No habitual mendicant shall be granted an allowance under the Scheme unless the practice of mendicancy is discontinued. No person shall be eligible to receive assistance under this Scheme who shall not have been resident within the County Borough for two years previous to date of application for assistance.

6. The Corporation may incur such expenditure in the execution of this Scheme as the Minister may from time to time approve.

7. This Scheme shall come into operation on the 1st October, 1932, and shall continue for a period of three years, but may during the period with the consent of the Minister be modified, extended or revoked by the Corporation, and with the like consent may be continued for such further time as may be deemed necessary. Any question, dispute or difference arising in connection with the interpretation of this Scheme shall be determined by the Minister whose decision shall be final.

SCHEDULE.

Institutions for the Blind Approved by the Minister	Class of Blind Persons Received
1. St. Mary's Institution for Female Blind, Merrion, County Dublin	Females, also boys up to 7 years of age
2. St. Joseph's Asylum for Male Blind, Drumcondra, Dublin	Males
3. Richmond National Institution for Industrious Blind, 41, Upper O'Connell Street, Dublin	Males
4. Cork County and City Asylum for the Blind, In- firmmary Road, Cork	Males and Females

The number of persons receiving weekly allowances in their own homes from the Corporation during the year was 222, and the disbursements under the heading amounted to £4,151 2s. 0d. 30 applications were received for allowances. Other disbursements amounted to £80 0s. 0d. (examinations, grant to National Council and other expenses). In addition to the above-mentioned 24 cases maintained in Institutions by direct grants from the Corporation, viz. :—Cork Blind Asylum (6 males and 5 females) ; St. Mary's, Merrion (12 females) ; and Richmond National Institution (1 male). The total cost of the maintenance amounting to £462 9s. 4d.

The following note is contributed by the Hon. Secretary of the local branch of the National Council for the Blind of Ireland.

Home Teaching for the Blind.

Under the National Council for the Blind, this very essential service has been inaugurated in Cork City, to which the Corporation has granted a small annual contribution towards the expenses incurred by employing trained and qualified Home Visitors and Teachers.

The work of the Home Visitor is varied and broad, embracing social as well as mental instruction. She must help the blind to become active members in their homes, teach them to read embossed type, various handicrafts, such as knitting and rugmaking, and to bring an interest and hope into their otherwise hopeless lives.

The Home Visitor can help to prevent blindness in children, who often, through parental ignorance and negligence, or want of interest, lose their sight, which under proper care and supervision can be cured by seeing that they are provided with glasses where necessary and sent for treatment. She also gives her assistance and advice over pension applications, appeals and better accommodation.

Wireless sets are distributed on loan where most required, entertainments organised and free seats at musical shows secured.

Voluntary visitors also give their services to read and spend some time talking to the lonely blind, who greatly appreciate these visits.

Classes are held weekly for instruction in basket making, chair-caning and other forms of handicraft. The finished articles are presented for sale only if up to standard—no inferior goods labelled “ Made by the Blind ” are passed for sale. Efficiency is the definite aim.

The Home Teacher becomes a real friend of the Blind, who turn to her in all their difficulties, knowing that they will obtain help and encouragement to become as useful and important as their sighted brothers and sisters.

Suitable cases are urged to enter institutions for the blind and arrangements made for this purpose.

The Home Teacher has office hours daily where any blind or defective sighted person can get in touch with her and make enquiries. Over the Home Visitor is an Executive Council who meet monthly, receive the reports of the Home Visitor, deal with various cases, arrange the financial side of the work and follow closely and with interest the progress which is being made.

The following is a resume of the work done by the Home Visitors of the National Council for the Blind.

Number of City cases on Register on 31st December, 1942 ...	378
Visits paid to the blind	1,914
Visits paid on behalf of the blind	216
Interviews at the Office, City Hall	665
Number of Braille Readers	19
Number of Moon Readers	4
Number attending Men's Handicraft Class	8
Number attending Women's Handicraft Class	11
Number of Home Workers whose work is of saleable standard	39
Number sent to Convalescent Home	1
Number helped to obtain spectacles and artificial eyes ...	5
Number given coal and Christmas Gifts	54
Number given clothing	51
Number given help over Dentures	3
Number given nourishment and relief during illness ...	75
Number given Wireless Sets on Loan	93

INDEX

	Page		Page
Births ...	2, 66	Neo-natal Mortality ...	64
Barometer ...	115	Physical Features ...	1
Blind, Welfare of ...	118	Population ...	2
Cardiac Disease ...	9	Port Sanitation ...	97
Cancer ...	10	Rainfall ...	114
Deaths ...	2	Schick Test ...	25 <i>et seq.</i>
Deaths—Uncertified ...	11	Scarlet Fever... ..	34
Deaths, Causes of ...	8, 9	Sanitary Inspections ...	92
Death Rates ...	5, 7	Slaughterhouses ...	80, 82
Diphtheria ...	14	Sunshine ...	115
Diphtheria Immunisation	24	Sewers ...	113
Diarrhoea—(Epidemic) ...	27	Shops ...	93
Disinfection—(Articles) ...	36	Smallpox ...	97
Epidemic Diarrhoea ...	27	Shipping ...	111
Enteric Fever ...	32	Typhoid Fever ...	32
Food and Drugs Acts ...	83	Typhus ...	34
Housing ...	94	Tuberculosis ...	38 <i>et seq.</i>
Infectious Disease ...	13 <i>et seq.</i>	Tripehouses ...	82
Infant Mortality ...	10, 12, 61	Temperature ...	115
Maternal Mortality	10, 66 <i>et seq.</i>	Uncertified Deaths ...	11
Midwives ...	69	Vaccination ...	35
Milk—Examinations ...	72 <i>et seq.</i>	Veterinary Dept., Inspections	92
Milk—Examination for		Venereal Disease ...	116
Tubercle Bacilli ...	74	Water Supply ...	87 <i>et seq.</i>
Meat Inspection ...	79 <i>et seq.</i>	Workshops ...	91

